Special 9

Camille Akmut

January 7, 2024

ARTICLES

[continued]

Bless Ken Auletta for that neutral yet hard-hitting piece.

Now Stanford is forever known as the "Get Rich U." competing with Aaron Swartz' descriptions around the same time of an academic version Disneyland (we don't know which one came first, if it matters at all).

The philosophy of journalism immanent to this writing is similar to the martial arts which make use of an opponent's power against them, turning an advantage into a disadvantage (through elegant defense).

The portrait of Elizabeth Holmes for *The New Yorker*, done in a similar vain two years later, is also well worth reading.

— "Blood, Simpler" *The New Yorker.* December 2014

There is a common denominator between this and an earlier article of Auletta for *The New Yorker* : Holmes had attended a certain, private, West Coast college and the earliest board members of Theranos were also professors at that same institution. But, can you guess which? Hint 1. It was in the news again recently because of a crypto. scam. Hint 2. It emphasizes as its mission "personal success"...

> "*Holmes started Theranos in 2003, when she was nineteen; she dropped out of Stanford the following year. (...) for many years it [Theranos] has operated with a stealth common to many Silicon Valley startups. "For a long time, I couldn't even tell my wife what I was working on," Channing Robertson, a chemical-engineering professor at Stanford and the company's first board member, told me.*"

Stanford being a common denominator for so many scandals may be pointing to severe structural or institutional issues rather than personal failings per se. Durkheim, the father of sociology, had mentioned two institutions being overwhelmingly responsible in determining an individual's actions : family and education, were key he argued.

The best part of the article, and height of the divine comedy, is reached when Elizabeth is so unhinged she starts describing her childhood as having been that of a child genius polymath, in all seriousness... reaching new levels of narcissism. Holmes herself of course comes from the upper classes of society (her near full genealogy can be found in the article, including several large capitalists).

> "*"I was probably, definitely, not normal," she said. "I was reading 'Moby-Dick' from start to finish when I was about nine. I read a ton*

> *of books.* ***I still have a notebook with a complete design for a time machine that I designed when I must have been, like, seven.*** *The wonderful thing about the way I was raised is that no one ever told me that I couldn't do those things."*

Elizabeth - who shares her name with the protagonist of Pride and Prejudice - is an avid reader of Jane Austen, to no surprise. In our experience, including as a fellow of literature at an elite college, Austen is consistently the favorite author of upper-class young women, the first reference point without failing of the bourgeoisie's daughters.

Everyone at Stanford wears flip flops according to 'Get Rich U.'. Does everyone inject their sentences with "like" and speak in a Valley accent too?

The Theranos CEO had a preference for turtlenecks and fashioned herself a female Steve Jobs during Ted talks, we are told... Does the adulation by the press at the time (*"she was profiled last spring in Fortune and subsequently featured in Forbes as "the youngest self-made female billionaire in the world.""*), or faux feminism of elite women underlying it, even merit critique anymore?

Her prison nickname today, we imagine, is Eli as in : "Ayo, Eli, you forget the toilet rolls again? I swear! On God!" Perhaps, it is in prison that Elizabeth, who grew up with all the privileges attached to her class, will finally understand the appeal of the Brontes and oh-bitter sweetness of a novel like Jane Eyre...

NOTES ON LEIBNIZ

Leibniz remains of interest to us - who study the history and sociology of computer science and technology - for the binary number system, calculus, an early mechanical computer... Theodicee, as we argued[1], is a poignant case of a logician entering the arena of morals only to come up with a solution, i.e. the best of all worlds argument, so stupendous that one cannot help but being reminded of contemporary arguments developed by technologists and their own strange ideas regarding sociology, social systems and politics... As Leibniz had done in his own time and context, being the late 17th and early 18th century and a still largely religious society, they continue to provide logical justifications for injustice in a 21st century setting, using modern concerns and panics around urban organization, housing, race, ecology etc. (instead of God, as was Leibniz' chief concern and that of many of his contemporaries).

But, there is one more aspect of Leibniz' life and work that makes him close to us. Leibniz played in his time a role similar to that of the Father Mersenne, before him, whose activities as an organizer of scientific correspondence in the 17th c. led to descriptions as a highly active node in a network.[2]

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[1] in our introduction to reading notes for that work.

[2] cf. our monograph on Pascal and the connected paper on the Port Royal gentlemen.

According to a rough estimate, (based on the collected writings and letters of L.), Leibniz had correspondents in the hundreds/thousands.

Among best known and arguably most important are the exchanges with Antoine Arnauld and Samuel Clarke. The correspondence with Arnauld centers on the *Discourse on Metaphysics* - an outline of which Leibniz sent expecting feedback - and is sometimes attached to editions of that work; While the correspondence with Clarke gives a background for the Newton controversies.

Leibiz' exchanges were often mediated by various aristocratic figures, in particular Caroline of Brandenburg-Ansbach (the later Queen). The letters are highly readable, and on occasion funny. The correspondence with Arnauld for instance had a shaky start, for Lebniz felt that his correspondent, whom he had great respect for, was being too harsh; he said he understood now that they were in contact why so many people were angry with him.

As for the Leibniz-Arnauld correspondence we like the edition/translation by G. Montgomery [*Discourse...*, Open Court 1902]. An editor of the Clarke correspondence, who may have an interest in inflating its value, called it "probably the most famous and influential philosophical exchange of the eighteenth century." and described Clarke "the greatest English theologian of his generation and the most gifted" of Newton's followers [*Leibniz and Clarke: A study of their correspondence*, Oxford 1997].

Also notable are the exchanges with the mathematicians of the Bernoulli family, Jacob and Johann.

Samtliche Schriften und Briefe contains all of the writings and letters available so far, in their original (production of which is ongoing, we believe).

Today the only person we know to play a similar role is Richard Stallman, as a receiver, transmitter and coordinator and the center node of a vast network of technical and political correspondence; using e-mail as a means of communication, primarily, in his case. There is a lineage between Mersenne (who was connected to Pascal and Port Royal), Leibniz and Stallman in that regard.

TELEVISION

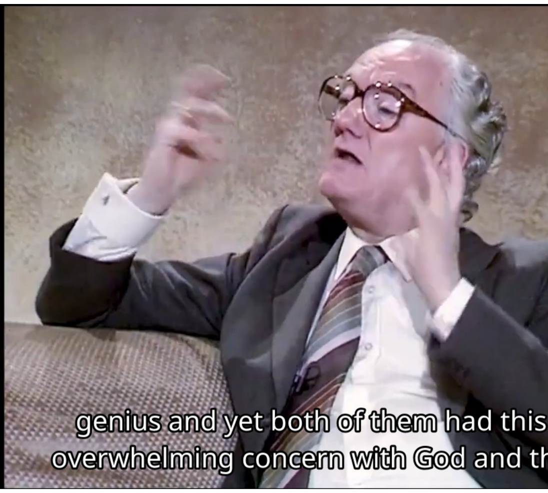
— *Men of Ideas* (1978) and *The Great Philosophers* (1987). BBC

At least the following episodes are of direct interest to us : first, the discussion of Spinoza and Leibniz [*TGP* 5] for providing a minimal but solid context of the time. (Related to this is the preceding Descartes episode, *TGP* 4.)

> “*For a long time now it’s been usual to see Western philosophy in the 17th and 18th centuries as divided between two opposing schools, British empiricism and Continental rationalism. The chief of the empiricists being Locke, Berkeley and Hume and the chief of the rationalists being Descartes, Spinoza and Leibniz.*
>
> *But of the many issue that divided them the most important, put in its crudest, was this : The rationalists believe that we human beings can acquire important knowledge of reality by the use of our minds alone, by thinking, by pure reason. The empiricists denied this, they insisted that experience was always a necessary ingredient, and that all our knowledge of what actually exists must in the end in some way or other be derived from experience.*
>
> *Again, the traditional view has been that these two opposing schools finally came together at the end of the 18th century and were combined in the work of Emanuel Kant.*”

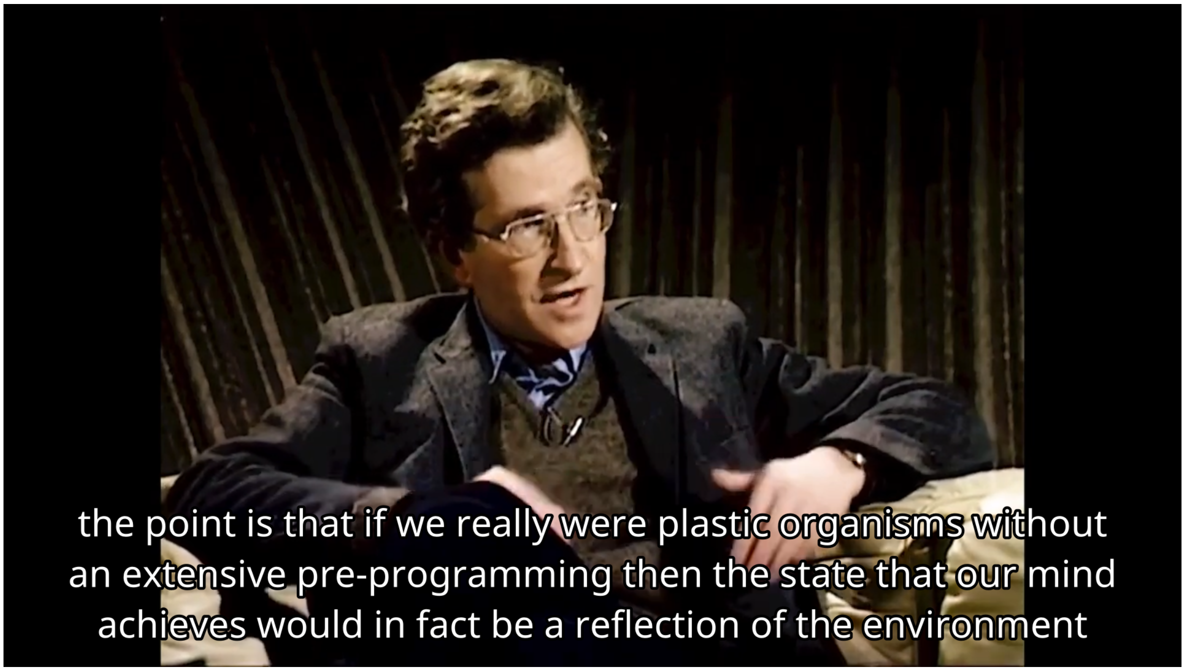
At the end Magee commented : “One thing that strikes me about both of them ... is something that is in a sense unmodern about both of them (...) Leibniz was a mathematician of genius (...) and yet both of them had this overwhelming concern with God”. Quinton added that Spinoza was much despised during his days and his contemporaries called him “the awful atheist Spinoza”.

Spinosa was much deplored in his own age


genius and yet both of them had this
overwhelming concern with God and th

Second, Chomsky’s interview [*MoI* 11], for his contributions to the philosophy of mind a.o.. Magee introduced Chomsky’s work as coming after that of Wittgenstein in the context of 20th century philosophy whose dominant problem is that of “the relationship between language and the world”.

The issue of free will, one of philosophy’s older preoccupations (found including in Leibniz’ work), was discussed in the segment we quote below. Against notions by psychologists, Chomsky defended ideas of “rigid pre-programming”.


the point is that if we really were plastic organisms without
an extensive pre-programming then the state that our mind
achieves would in fact be a reflection of the environment

Magee – He first put his ideas forward in the late 1950s as part of a critique of behavioral psychology. It's not too unfair to say that the behavioral psychologists had tended to talk as if the human individual came into the world as an undifferentiated lump of malleable stuff, which was then molded and shaped by its environment, through processes of stimulus and response they said, penalty and reward, the reinforcement of rewarding responses, and the association of ideas, the individual developed and learned, including the learning of language. (...)

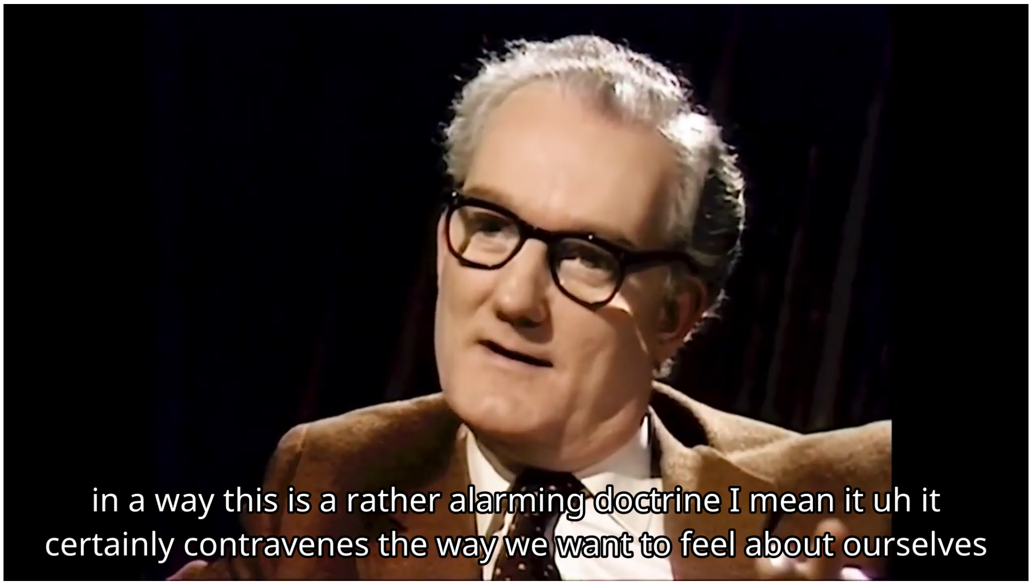
Magee – There are certain things we can understand, certain things we can communicate, and anything that falls outside that we simply can't. Is that so?

Chomsky – That's certainly correct.

Magee – Uh, so I mean, in a way, this is a rather alarming doctrine. I mean, it, it certainly contravenes the way we want to feel about ourselves.

Chomsky – Well, that may be an immediate reaction, but I think it's not the correct reaction. In fact, while it's true that our genetic program rigidly constrains us, I think the more important point is that the existence of that rich - of that rigid constraint is what provides the basis for our freedom and creativity.

> Magee – You mean, it's only because we are preprogrammed that we can do all the things we can do?
>
> Chomsky – Exactly. The point is that if we really were plastic organisms without an extensive preprogramming, then the state that our mind achieves would, in fact, be a reflection of the environment, which means it would be extraordinarily impoverished.



in a way this is a rather alarming doctrine I mean it uh it
certainly contravenes the way we want to feel about ourselves

In his introduction Magee appears to be referencing Chomsky's *Syntactic Structures* and/or writings from that period such as the review of Skinner published in Language... From a quick review we could not tell if the Chomsky hierarchy was a part of the discussion, interview.

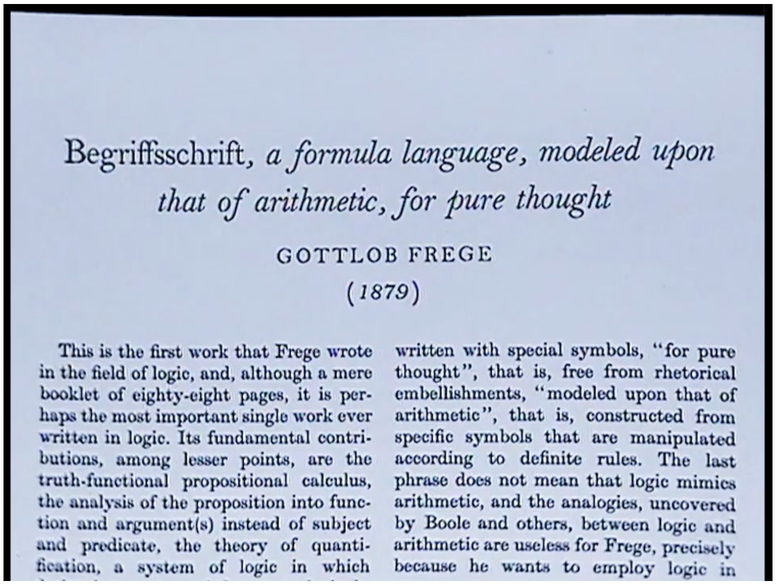
Apart from this, these series are a testament to the benefits and greatness of public television (such a format of high quality discussions is rarely found). Magee, the host, himself was a philosopher from Oxford; Quinton, a recurrent guest, the president of Trinity College. They offer the equivalent of an Introduction class to philosophy, from Plato to about Wittgenstein, and a graduate seminar on modern philosophies : in addition to Chomsky, Marcuse himself presented the Frankfurt school, for example. Also noteworthy, Peter Singer discussed Hegel and Marx (despite being more of the moral philosopher kind).

It is further representative of a time when seemingly no one saw an issue with putting together a program of intellectual discussion - all the more so as centering on a discipline of universalist aspirations or ambitions, like philosophy - made up of only men (likely all white); exceptions were Martha Nussbaum who talked about Aristotle and Iris Murdoch, on links between philosophy and literature. [30 episodes means 6% i.e. 6 women for every 100 men invited]

Special 9-2

Camille Akmut

January 8, 2024



Begriffsschrift, *a formula language, modeled upon that of arithmetic, for pure thought*

GOTTLOB FREGE

(*1879*)

This is the first work that Frege wrote in the field of logic, and, although a mere booklet of eighty-eight pages, it is perhaps the most important single work ever written in logic. Its fundamental contributions, among lesser points, are the truth-functional propositional calculus, the analysis of the proposition into function and argument(s) instead of subject and predicate, the theory of quantification, a system of logic in which

written with special symbols, "for pure thought", that is, free from rhetorical embellishments, "modeled upon that of arithmetic", that is, constructed from specific symbols that are manipulated according to definite rules. The last phrase does not mean that logic mimics arithmetic, and the analogies, uncovered by Boole and others, between logic and arithmetic are useless for Frege, precisely because he wants to employ logic in

Third, the episode about Frege and Russell with A. J. Ayer, who had written "the best short introductory book on Russell's work" per Magee [*TGP* 14].

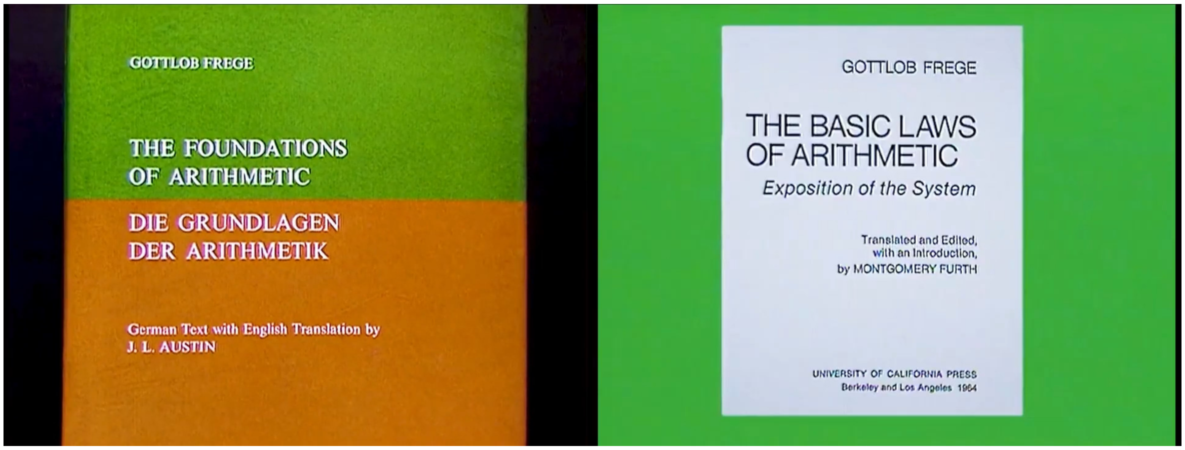
> "A great deal of the philosophy that's going on today in the English-speaking world, in fact probably most of it, can be traced back through intermediate developments to the work of two men : Gottlob Frege and Bertrand Russell. Working for the most part independently of each other, they laid the foundations of modern logic."

Magee introduced the topic, before moving to the individual portraits.

> "Frege, a German was born in 1848 and spent his entire working life in comparative obscurity in the mathematics department of the University of Vienna. Not until after his death did his name become known at all widely, even among philosophers. His first major work published in 1879 was called Begriffsschrift (...) the English translation keeps the German title because there's no satisfactory English for it. It means something like the putting of concepts into notation. (...) His next major work, published in 1884, is called, in English, *The Foundations Of Arithmetic.* He went on producing important and original work most notably in 1893 and 1903 two volumes of a projected larger work called, in English, *The Basic Laws Of Arithmetic.* But, it was all of such depth and difficulty that his work in general remained very largely unknown until Bertrand Russell drew attention to it in 1903.
>
> Russell was a totally different sort of person. Grandson of a British Prime minister (...)"

Discussion of Frege began with the difference between Sinn and Bedeutung, and its complication once translated into English.

> Magee – I suppose the most historically influential distinction that he introduced was between sense and reference, which has to do with his theory of meaning, and one still hears people constantly referring to this. Can you explain it?
>
> Ayer - Yes. It's fairly complicated. The two German expressions are Sinn, which is generally translated as sense, and Bedeutung which is translated - which is in fact the German word for meaning, but philosophers usually translate it as either reference or denotation.
>
> And, the denotation of a name is the object to which it - which it names. I mean the denotation of Bryan Magee is you [laughs], the actual person.
>
> Whereas the sense of the name is the contribution that it makes to the meaning. Say, if I just say Tom, you have to say to me 'Who's Tom?' and then I say : well Tom is so-and-so's brother, or the person who invented such and such (...) and in this way I give you a sense, and in this way I enable you to identify him.
>
> Now, this distinction becomes important in certain contexts (...) and one good example would be statements of identity. Frege's own favorite example was that of the Evening Star and the Morning Star. Both of which, as you know uh...
>
> Magee – They're the same star.
>
> Ayer – Venus.



GOTTLOB FREGE

THE FOUNDATIONS
OF ARITHMETIC

DIE GRUNDLAGEN
DER ARITHMETIK

German Text with English Translation by
J. L. AUSTIN

GOTTLOB FREGE

THE BASIC LAWS
OF ARITHMETIC

Exposition of the System

Translated and Edited,
with an Introduction,
by MONTGOMERY FURTH

UNIVERSITY OF CALIFORNIA PRESS
Berkeley and Los Angeles 1964

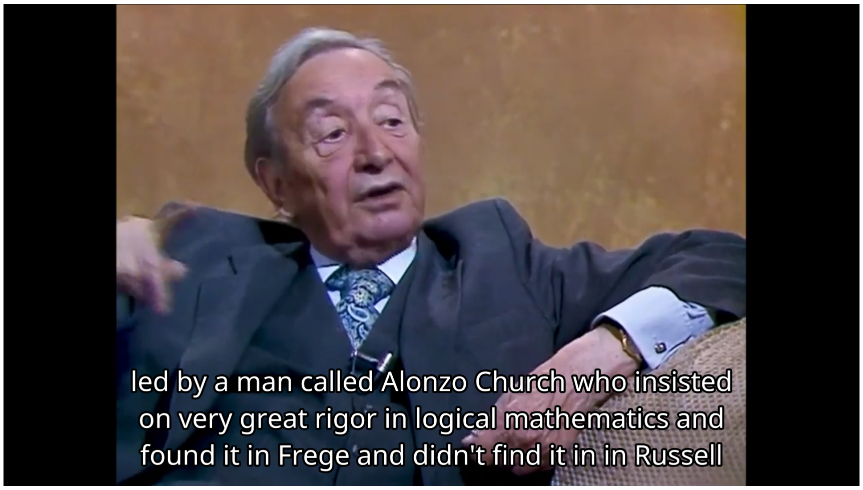
Michael Dummett at one point is mentioned and became the center of attention, (who is the successor of Ayer at Oxford), described as “the leading living commentator on Frege” by Magee. According to the latter, Dummett credits Frege with having “de-psychologized” philosophy thus opening a new era. Ayer disagrees, feeling it is an exaggeration, arguing instead that meaning has been a preoccupation of philosophers since Socrates.

The discussion ended with considerations of legacy, as is usual for the format of the program. The men focused on what they called “the revival of Frege”, who had come to overshadow Bertrand Russell. Ayer said that Russell felt he was not getting his due and that it caused him great pain.

While expressing confusion and doubts over exact or full causes, Ayer attributed the trend to developments in America and the school of logicians led by Alonzo Church...

In England he cited the publication c. 1960 by William and Martha Kneale of “a very impressive history of logic”, (he must mean *The Development of Logic*), “in which very great importance is given to Frege. He’s put on a level with Aristotle.”

In-between came multiple translations : Austin’s 1950 *Grundlagen* followed “two or three years later” by Max Black and Peter Geach’s “of two of Frege’s very obscure but important semantic essays, one of them called ‘Sense and Reference’, and the other called ‘Function and Concept’.”



led by a man called Alonzo Church who insisted
on very great rigor in logical mathematics and
found it in Frege and didn't find it in in Russell

A strength and weakness of the program was its reliance on Magee’s Oxford network. At least it was not US-centric.

During his near interminable, 100 fetid years, Henry Kissinger was seemingly involved in all of humanity’s worst plans and schemes. (Guided by greed,) he also somehow managed to be involved with Theranos.

> *The board of her company is stocked with prominent former government officials, including George P. Shultz, Henry Kissinger, Sam Nunn, and William H. Foege, the former director of the Centers for Disease Control and Prevention. Dr. Delos M. Cosgrove, the C.E.O. and president of the Cleveland Clinic, is an avid supporter. “I think it’s potentially a breakthrough company,”* (...)
>
> *Bill Frist, a trained cardiac surgeon and former Senate Republican Majority Leader; (...) Sam Nunn, a former Democratic senator and chairman of the Armed Services Committee; William J. Perry, the former Defense Secretary; and Richard Kovacevich, a former C.E.O. and chairman of Wells Fargo. All receive stock options from the company, among other forms of compensation.”*

At this point, a question that should have probably been asked is what a person like Kissinger is doing on the board of a tech start-up - for, after all, there is nothing obvious about the fact, or what a foreign policy expert could provide to a medical product - again nothing very obvious here;

Or perhaps Ken might have put it outright : What’s a war criminal got to profit from a blood test?

A limit, and limitation, of Ken’s style of journalism, for all of its subtle strengths and gentlemanly elegance, is reached here.

Putting aside the specific case of Kissinger’s involvement in Theranos, what is certain based on this expose is that there exists a vast revolving door between Government — in particular Defense, War, and foreign policy staff — and the technology sector. Which likely should not exist in that capacity and cannot be benefiting democracy.

Condoleezza Rice was famously hired by Dropbox, (where she continues to be on the board), to give another example. Again, at first sight the involvement of someone like Rice in a big data storage application start-up is far from self-explanatory... On the contrary, her political record - as Secretary of State under Bush - spoke against her appointment at a platform used by millions to store including personal and sensitive files. She had previously been on the board of Chevron, the big oil company, and an assortment of similarly dubious firms : Schwab (the large bank - investment fund founded by Stanford alumni and Republican donor Charles Schwab), where Schultz had also been a board member, the RAND Corporation, etc.

Ken doesn't make the connection with Condoleezza Rice, yet another Stanford associate, even though her appointment at Dropbox had been big news in 2014; Wired even called it an "Internet Revolt"...

Ken doesn't really ask the questions, and hence never reaches many answers. We can only speculate but we think it likely that Theranos - had it somehow managed to get a working or at least approved product out - was going to sell to countries in Africa (where Kenya is often the starting point) or Asia (India, Pakistan, Vietnam, Thailand...). AIDS testing is mentioned as one of the applications in fact envisioned. A battle-tested Kissinger, with his large network of foreign contacts, in this scenario would have been invaluable e.g. to navigate foreign markets and possibly bypass or accelerate regulation. Later in the article it is revealed that Kissinger explicitly advised on how to approach "developing nations" (without being too obvious about exploiting them)... :

> *Kissinger advised Holmes to concentrate on building up Theranos in the U.S. before launching it in developing nations, he said, so that "it would not look like we were experimenting on them."*

Among many things, Shultz was for Reagan what Kissinger had been for Nixon i.e. Secretary of State, a graduate and teaching staff of MIT (whereas Kissinger at Harvard), and prof. at U. of Chicago's Business School.... According to the article it was Schultz that recruited the other board members.

Did Shultz, Kissinger, Robertson or any of the many board members and supporters mentioned ever face substantial consequences for their participation and role in Theranos?

One big absent from this reporting is Ian Gibbons.

We skip more descriptions of Holmes as, essentially, a modern day savant or 21st century Curie - either promoted by Holmes, her parents or Channing Robertson (knowledge of Mandarin, etc.).

She successfully sold to Ken and the New Yorker - and then through them - an image of a highly desirable single, brave, innovative woman even though she was dating Balwani the whole time (who does appear in the story on two occasions), and had been doing so for a decade by the time Ken knocked on her door... In the end, the material collected however is valuable.

> (...) *She was travelling alone. Members of the Theranos board sometimes worry about Holmes. "My wife and I feel that one of our jobs is to bring her out," George Shultz told me. They invite her to the theatre, and this year threw her a thirtieth-birthday party at their home,*

> *which was attended by her parents, her brother, Balwani, Robertson, and several members of the board and their spouses. Henry Kissinger and his wife, Nancy, have tried, without success, to fix her up on dates. Her mother told me, "As a parent, I do hope that at some point she will have time for herself."*

It seems that an alternative or original title, or sub-title of the article was 'One Woman's Drive to Revolutionize Medical Testing'.

— "Internet Revolt Begins as Condi Rice Joins Dropbox Board" *Wired* April 2014.

> "Amid the shiny, happy announcements of new features and new apps this week, file-sharing startup Dropbox quietly revealed another piece of news. Condoleezza Rice – Stanford professor, Iraq War architect, alleged warrantless wiretap supporter – is joining the board at the rising tech startup.
>
> Dropbox CEO Drew Houston didn't mention the appointment during his keynote at a press event on Wednesday, but a day later, Rice's arrival had eclipsed the rest of the company's carefully crafted public event. Unsurprisingly, some people aren't too happy about the move. (...) in part because of her support for the Bush administration's warrantless wiretapping program, including claims that Rice herself authorized eavesdropping on UN Security Council members. (...)
>
> "When looking to grow our board, we sought out a leader who could help us expand our global footprint," Houston wrote on Dropbox's blog. "Dr. Rice has had an illustrious career as Provost of Stanford University, board member of companies like Hewlett Packard and Charles Schwab, and former United States Secretary of State. We're honored to be adding someone as brilliant and accomplished as Dr. Rice to our team." "

Houston did not attend Stanford, he attended that other certain, East Coast, private college usually involved in big technology scandals...

Special 10

Camille Akmut

January 9, 2024

“TRAGEDY OF THE COMMONS”

Critiques of the so-called “tragedy of the commons” go back multiple decades, including specifically with respect to technology :

In an early text, based on a speech given at Fordham at the end of the 1990s, Lessig had already formulated a critique of the “tragedy” whose main point can be summarized as the discrepancy between the availability of many commons — among examples he cited the Web, Linux, Central Park and science... — and the purported inevitability of tragedy / depletion.

> “*But careless thought here is likely to carry this notion of tragedy too far. For again, if Commons face such an inevitable tragedy, how is it that we have so many of them around us? If tragedy is its destiny, how is it that parks and Linux can so dramatically flourish as they do?*” [p. 408]

Reasoning in this is a bit simplistic and leaves many technicalities out : It could and should have been added that software (L. uses the example of “open source”, his term) has characteristics different from the kind of commons that Hardin had in mind (natural resources mainly). Accessing or copying a file is not equivalent to many natural – i.e. non-digital – acts... A file remains, intact, after a copy is made or transmitted or being accessed. A tree that is cut down can be replaced but a sapling needs many years if not decades to grow to full size. Water drawn from a pool does not magically come back. Cryptocurrency farms are an interesting example in that their energy expenditures and environmental impact are so great one is almost led back to the old finite natural resource scenario or paradigm. To a degree it extends to data centers in general.

In *The Future of Ideas*, Lessig came back to revisit the concept in more depth. This book was sub-titled ‘The fate of the commons in a connected world’. First occurrence of the tragedy, so-called, is in chapter 2.

> “*If you’ve used the word commons before, you’re likely to think of a park, as in the Boston Common. If you’ve studied economics or political science, your mind will race to tragedy (as in “the tragedy of the commons”).*” [p. 19]

There, Lessig acknowledged the idea that there were different kinds of commons, at least that he needed to address the critique or possibility : he evoked the distinction drawn by economists between what they call “rivalous” and “non-rivalous” goods...

> “*Economists will object, however, that my list conflates two very different cases. Einstein’s theory of relativity is different from the streets or public beaches. Einstein’s theory is fully “nonrivalrous”; the streets and beaches are not. If you use the theory of relativity,*

> *there is as much left over afterward as there was before. Your consumption, in other words, does not rival my own. But roads and beaches are very different. If everyone tries to use the roads at the very same time* (...)" [pp. 20-21]

In the second version of *Code and Other Laws of Cyberspace* (2006) we did not find that same great preoccupation, although the notion does appear a few times on the side.

The Jacobin crowd are rarely original, at the forefront of critique, or take the utmost risks — that work is done elsewhere by other people — but they do have a way of hitting the nail on its head and driving a point home for good, or otherwise clarifying issues and making them accessible to a large public. In a recent article, a contributor went ahead and called the tragedy point blank "a ring-wing concept".

> "*The criminals producing the current climate crisis would have us believe it's a "tragedy of the commons" — the inevitable result of individuals pursuing their self-interest in a world of finite resources. The term was popularized by biologist Garrett Hardin in a 1968 article in Science, one of the most cited — and vociferously refuted — scientific essays of the twentieth century. Hardin maintained that environmental tragedy inevitably accompanies the public use and management of land, water, and air. But the real history of the depletion of the commons tells almost the opposite story: one of privatization, enclosure, and relentless profit seeking.*"

We looked in *Free Software, Free Society* but could not find the terms 'tragedy', 'commons', nor Hardin, there.

Finally : In science fiction, designs such as replicators have been proposed, whose concrete details are left vague, but we assume they work. 2 things are worth noting : on one hand that when the replicators are not available, wholly and even partially - either through failure, necessity or absence - the utopian social order of Star Trek is threatened (many episodes contain incidences of malfunctions, rationing and crews being stranded, stuck on foreign planets...);

On the other hand, the replicators don't lead *automatically* to a just society! It is still a matter of politics when it comes to deciding how to utilize that technology and in the interest of which populations, the collective - as is the case under Starfleet control - or an elite. In one episode, a couple of Ferengi - a race known for greed - use a replicator for petty personal enrichment on a planet of limited scientific, technological advancement and indigenous beliefs, religion or superstition.

Also worth noting, Starfleet does not share the commons-enabling technology in several instances, mainly when it is believed that doing so would have negative consequences including for the commons, which in the future includes space traveling (e.g. Prime Directive violations, disturbing balances of power in contested regions of space or at war, etc.).

Ref.

- Lawrence Lessig. 1999. “Commons and Code”. Keynote address. *Fordham Intellectual Property, Media and Entertainment Law Journal* Vol. 9.
- ___. 2001. *The Future of Ideas.* Random House.
- ___. 2006[1999]. *Code.* Version 2.0. Basic Books.
- Richard Stallman. 2002. *Free Software, Free Society.* FSF.
- Star Trek. e.g., Voyager (1995-2001).
- “The “Tragedy of the Commons” Is a Dubious, Right-Wing Concept” *Jacobin* Oct. 2023.

LEIBNIZ NOTES

Leibniz has not received the same attention as other comparable philosophers - either through unity of themes or time - in film or television.

Descartes, for example, was the subject of a film by Rosselini (*Cartesius*); He was referenced in a memorable passage of *Ghost in the Shell II* in which his daughter Francine is evoked. Pascal also was picked by Rosselini for his line of biographies of philosophers, along with Socrates and Augustine.

In *The Big Bang Theory*’s third season [2009], Leibniz was mentioned but only in the reductive context of the Leibniz - Newton controversy. Ep. 11, ‘The Maternal Congruence’, set during Christmas, sees Sheldon wanting to put a Newton bust on the tree. When this is refused to him, he concludes his interlocutor, Leonard, must favor Leibniz in the claim over calculus.

No, it's fine. Sir Isaac can go
next to this candy cane.

Yeah, you got me. I'm a leibniz man.

Christmas leads to Newton leads to Leibniz...

Sheldon - December 25th, 1642, Julian calendar, Sir Isaac Newton is born. (...)
Leonard - Merry Newtonmas, everyone. (...)
S. - Isaac goes at the top of the tree.
L. - No, he doesn't.
S. - I understand.
You dispute Newton's claim that he invented calculus...
and you want to put Gottfried Leibniz on the top.
L. - Yeah, you got me. I'm a Leibniz man.

Merry newtonmas, everyone.
and Leibniz, who was
a jerk to everyone.

In the series' last season, Leibniz was again mentioned through the lens of the association with Newton, as illustration for how "science has a history of difficult people". Leibniz and Newton are called "jerk" by Leonard, with Leibniz being the bigger one (as part of what looks to be a largely improvised argument).

L. - Just give them a chance. Science has a history of difficult people.
Look at, uh, Newton, who was a jerk to Leibniz, and Leibniz, who was
a jerk to everyone.

Is this episode also set during the Christmas season? There is at least one reference to it. [S12E18, 'The Laureate Accumulation', 2018]

In the first season of *Fringe*, in 'The equation', Leibniz once more was cited by association with Newton and calculus, as examples of people arriving at the same idea independently, per Walter. [S1E8, 2008]

Walter - Ben's piece is the musical equivalent of Dashiell's mathematical formula.
Peter - How is that possible? They'd never even met each other.
W. - Oh, it's not so surprising, actually. Curious minds often converge on the same idea.
Newton and Leibnitz independently, without knowing each other, invented calculus.

Special 11

Camille Akmut

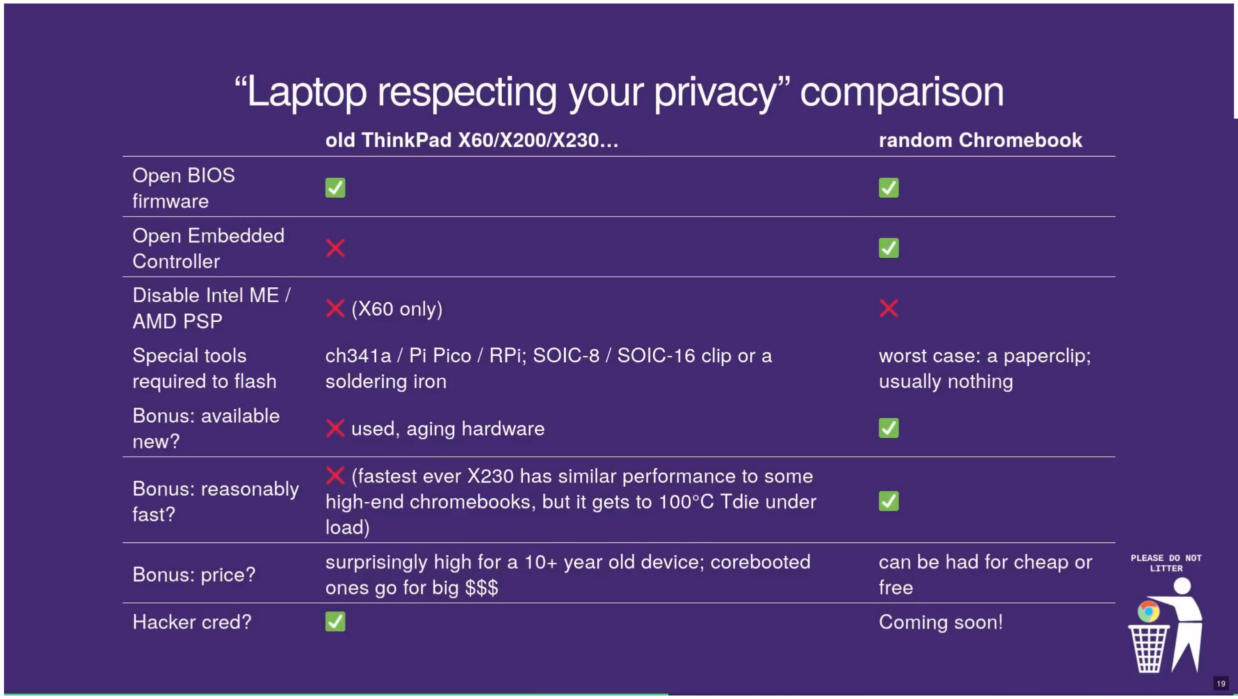
January 11, 2024

(37C3 special. Selected talks.)

title	speaker
“Turning Chromebooks into regular laptops”	ellyq and sdomi
“Nintendo hacking 2023: 2008”	PoroCYon
“The Ultimate SPC700 Talk”	kleines Filmrollchen

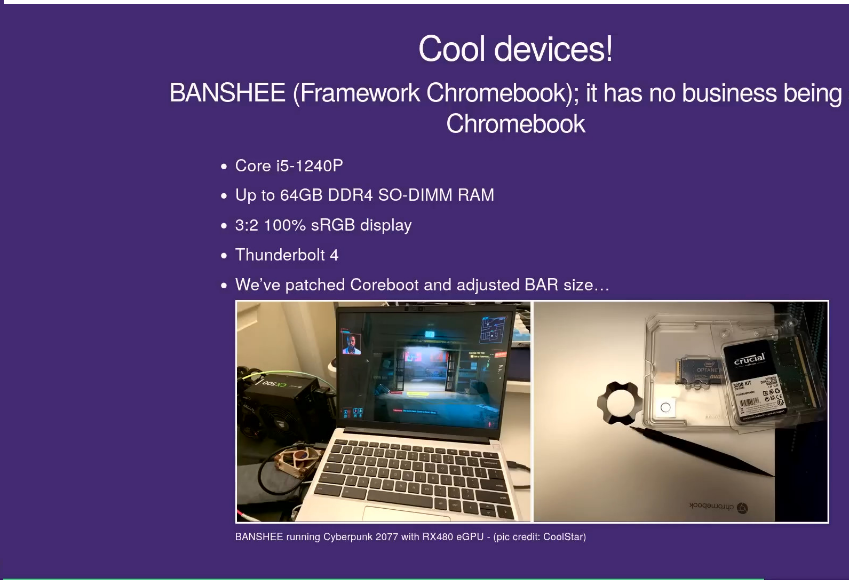
title	speaker
(State of Tor talk)	Roger Dingledine

A highlight of this year’s convention, due to broad potential, was the presentation by the Chrultrabook people, ‘Turning Chromebooks into regular laptops’.



“Laptop respecting your privacy” comparison

	old ThinkPad X60/X200/X230…	random Chromebook
Open BIOS firmware	✓	✓
Open Embedded Controller	✗	✓
Disable Intel ME / AMD PSP	✗ (X60 only)	✗
Special tools required to flash	ch341a / Pi Pico / RPi; SOIC-8 / SOIC-16 clip or a soldering iron	worst case: a paperclip; usually nothing
Bonus: available new?	✗ used, aging hardware	✓
Bonus: reasonably fast?	✗ (fastest ever X230 has similar performance to some high-end chromebooks, but it gets to 100°C Tdie under load)	✓
Bonus: price?	surprisingly high for a 10+ year old device; corebooted ones go for big $$$	can be had for cheap or free
Hacker cred?	✓	Coming soon!



Cool devices!

BANSHEE (Framework Chromebook); it has no business being Chromebook

- Core i5-1240P
- Up to 64GB DDR4 SO-DIMM RAM
- 3:2 100% sRGB display
- Thunderbolt 4
- We’ve patched Coreboot and adjusted BAR size…

BANSHEE running Cyberpunk 2077 with RX480 eGPU - (pic credit: CoolStar)

Background for this project is that a lot of the devices favored by free software people (Thinkpads up to X230 mainly) are aging and won’t be able to be utilized forever. Prices have also gone up significantly in recent years.

Advantages of Chromebooks are listed in a chart whose title and make-up resembles that of documents produced, traditionally, by the Free Software Foundation or GNU project; and could be considered a gentle yet competitive nudge. [Domi has eBay charts in mind... : we’re not sure all of their colleagues did.]

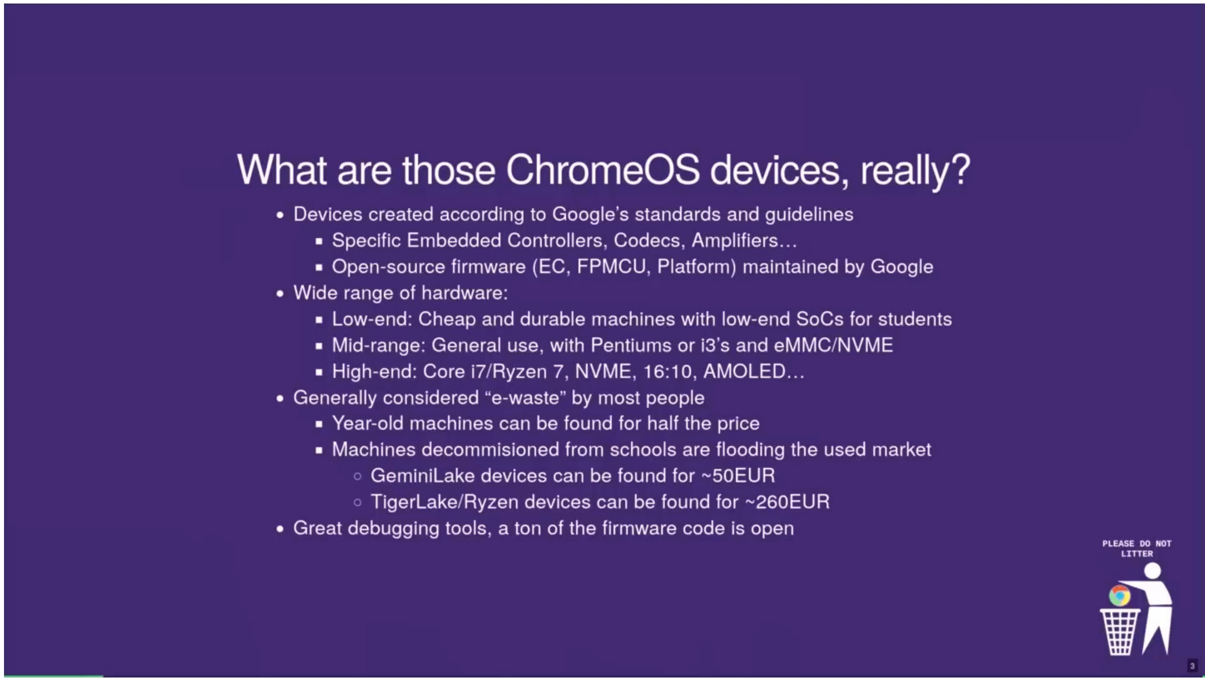
Noteworthy, their solution doesn’t fix the problems of the Intel Management Engine; which is the current front of the battle. Are Chromebooks as durable and easily modified? This would be surprising : the old Thinkpads are built like tanks; whereas we tend to associate Chromebooks with flimsy, plastic, designs.

Later, in a slide entitled ‘How do I get started?’, Chromebooks are ranked by their current support : Intel-based (described as “easy mode”), AMD (“hard mode”) and ARM64 (“expert mode”). At the end of the presentation they give specific examples of “cool devices” available e.g. a gaming laptop by Framework and a tablet.

Summary on the state of ARM64 is troubling : they mention the AOP or “Always-On Processor” under Qualcomm. Their rendition is ambiguous : slides have the annotation “*kinda like ME/PSP?*” while Domi comments “*This is just like the Intel ME.*”. Based on the presentation we did not understand if Mediatek had similar issues or a comparable unit. It would be desirable if Elly, who is the more experienced person, (having introduced D. to the project), spoke more. Their work is hindered or slowed down by the fact they must pay for testing hardware by themselves - this should be funded.

It is unfortunate that so much of the most exciting work today is done outside of the aforementioned, historically significant institutions and that members do not identify with their legacies, instead finding “open source” more relatable, preferable. This should conduct their leaderships to serious soul searching and cannot be blamed on the - often young, also idealistic - hackers alone. Panfrost was already not a GNU project, Libreboot ceased being one, the Guix people are a heterodox or fringe crowd within GNU...

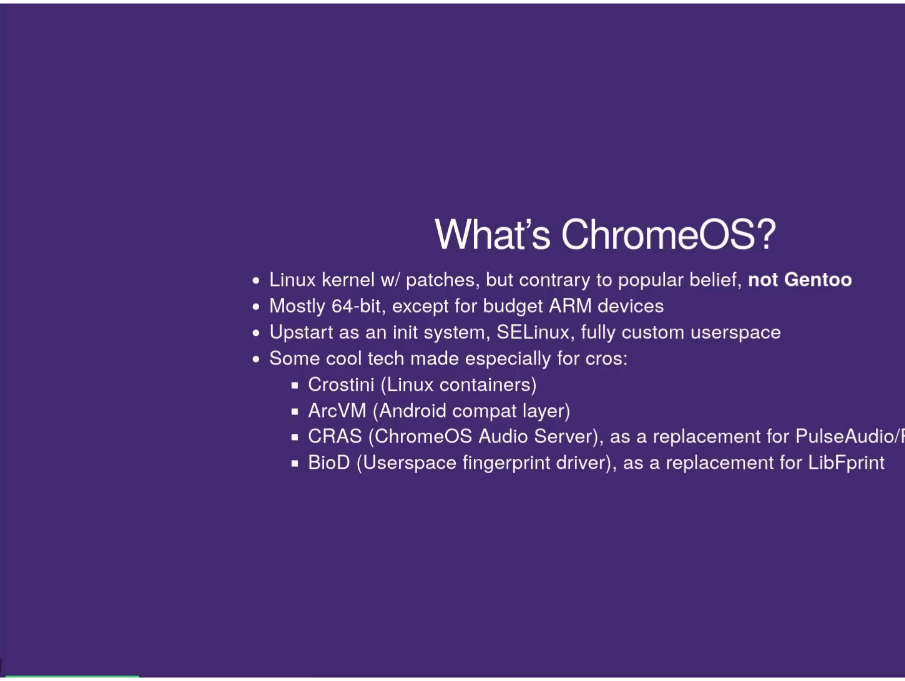
Dingledine gave his usual, annual Tor talk : recent events, as perceived from the project, in Russia - where a far reaching ban was orchestrated, Iran, Turkmenistan... 0



What are those ChromeOS devices, really?

- Devices created according to Google's standards and guidelines
  - Specific Embedded Controllers, Codecs, Amplifiers…
  - Open-source firmware (EC, FPMCU, Platform) maintained by Google
- Wide range of hardware:
  - Low-end: Cheap and durable machines with low-end SoCs for students
  - Mid-range: General use, with Pentiums or i3's and eMMC/NVME
  - High-end: Core i7/Ryzen 7, NVME, 16:10, AMOLED…
- Generally considered "e-waste" by most people
  - Year-old machines can be found for half the price
  - Machines decommisioned from schools are flooding the used market
    - GeminiLake devices can be found for ~50EUR
    - TigerLake/Ryzen devices can be found for ~260EUR
- Great debugging tools, a ton of the firmware code is open

PLEASE DO NOT
LITTER



What's ChromeOS?

- Linux kernel w/ patches, but contrary to popular belief, **not Gentoo**
- Mostly 64-bit, except for budget ARM devices
- Upstart as an init system, SELinux, fully custom userspace
- Some cool tech made especially for cros:
  - Crostini (Linux containers)
  - ArcVM (Android compat layer)
  - CRAS (ChromeOS Audio Server), as a replacement for PulseAudio/
  - BioD (Userspace fingerprint driver), as a replacement for LibFprint

— "Nintendo hacking 2023: 2008"

Non-obvious subject of this talk was the DSi console and the genesis of its hack. Further its - enigmatic but clever - title is unlikely to make sense without an additional piece of information. Its denomination is a direct reference to an earlier presentation, "Nintendo Hacking 2016", from 33C3, which focused on another but related handheld by Nintendo, the 3DS. That talk is in fact regularly referenced, though mostly left implicit, as one of the strategies employed by this hacker consists in trying out and applying methods that had been previously successful in similar devices on the DSi.[1]

The speaker began with the DS to explain differences compared with the DSi, in particular the use of symmetric encryption in the former and switch to public-key encryption afterward :

> *"The DS was the first console by Nintendo to use cryptography, but they made the mistake of using symmetric key cryptography. Which means that the key to encrypt a cartridge is the same key used to decrypt, which has to sit in your console. So if that key gets leaked, you can make your own cartridges. Which is exactly what happened. (...) It got really popular and Nintendo didn't like that. Because, that way, just using a flash card, it's really easy. (...) From that point on Nintendo had to use public key cryptography, which does not have this problem."*

Encryption appears to have been introduced and used by the manufacturer as an anti-piracy measure (to protect the games and console).

The speaker cited an early attempt to hack the console : the 'RAM tracer' project by scanlime[2] from 2009. The speaker commented : "*She built this impressive setup where she could do a MitM attack against the external RAM bus. So, that way, she could see every read and write on that bus, and that way she could extract code of games and then find vulnerabilities in them.*" They note that things stalled after this.

'Unlaunch', another project from 2018, is evoked later : its limitations are explained especially the reliance on the console's eMMC, which apparently is very fragile, making the frequent write-and-read operations required by trial and error, debugging etc. dangerous. "*As soon as the eMMC breaks, your console is break.*" The next step in the experimentation process may at this point already be apparent to some : "Can't we just replace the eMMC chip?" the next slide of the presentation asks. However the experimented hacker here already can foresee the next problem arising, which are issues related to unique identifications of hardware and more measures implemented by manufacturers to prevent their replacement by the user... Keyword : so-called "secure boot"[3], which makes booting up of a computer equipment dependent on the presence of uniquely identified components (in addition to the eMMC, the 3DSi also has a console-specific ID fused into the main SoC). Replacing the eMMC was not possible making other approaches necessary. Seeing the gradual logic unfold is quite gratifying.

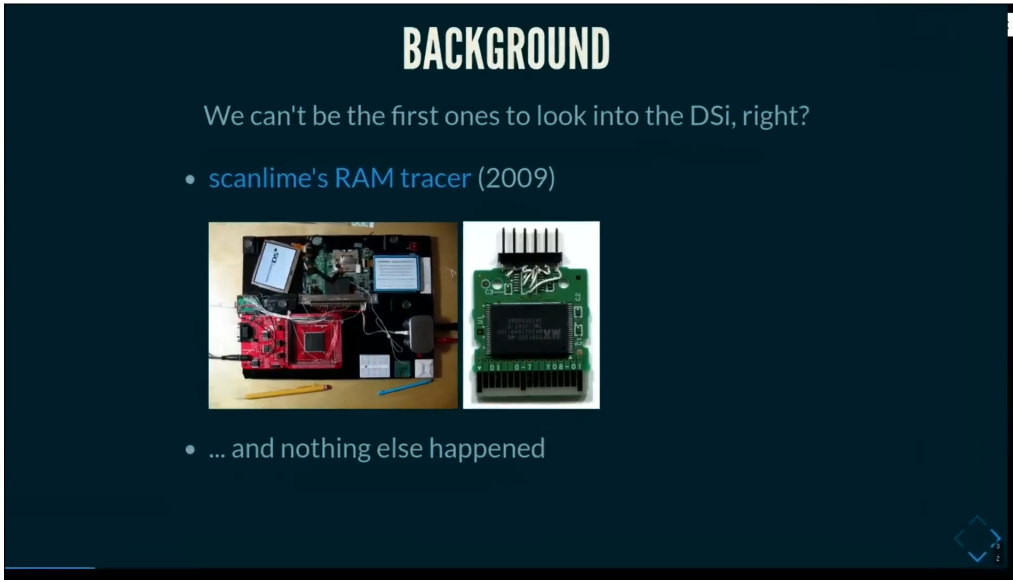
---

[1] Other recent console presentations at the convention which can be cited include for example the Switch console security talk from 34. Yet another console by Nintendo : Nintendo, for many reasons (as a historical monopoly, its poor treatment of third parties, censorship), has a bad reputation that may explain why it is a favorite or regular target. Something like the Microsoft of video games, or Disney...

[2] a cutesy, hacker-typical word play on scanline and the fruit?

One approach to hacking the DSi was to try using strategies that had already worked on other Nintendo consoles specifically handhelds. The 3DS was a good candidate and hypothesis since it has a backwards compatibility with the DSi, not only that but one that goes beyond mere software emulation, it works at the hardware level.

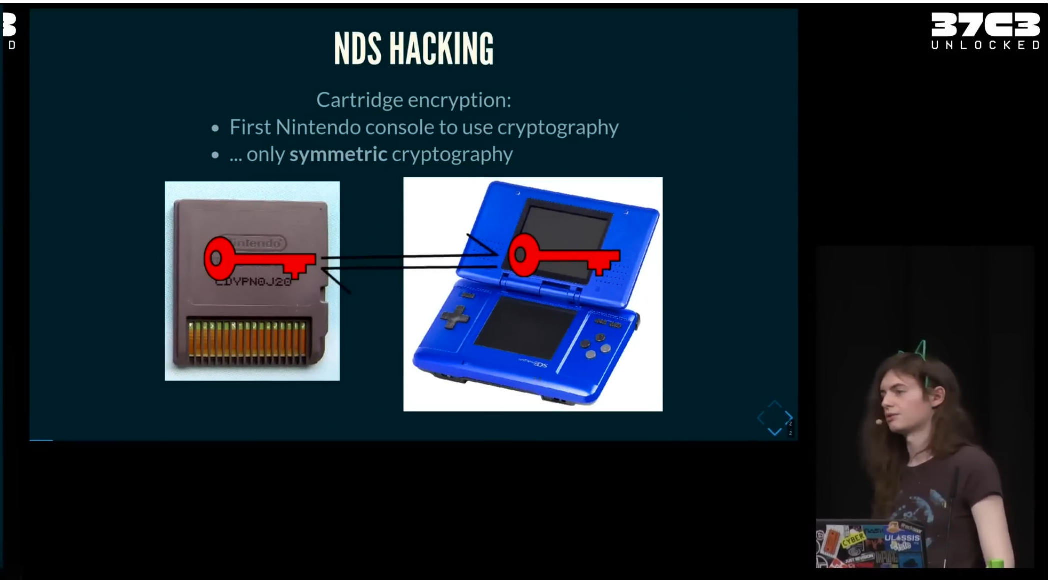
For example, a 3DS hack uses one core to take over the rest but this did not work on the DSi. Fault injection, which worked on the 3DS because that console retains some information in RAM even after reboot (by way of which a payload can be injected), however did. "*The 3DS has this interesting thing, where there's a hardware flaw that using fault injection you can actually extract the bootroms.*" This characteristic was described by the original presenter as a "cute HW flaw"...



BACKGROUND

We can't be the first ones to look into the DSi, right?

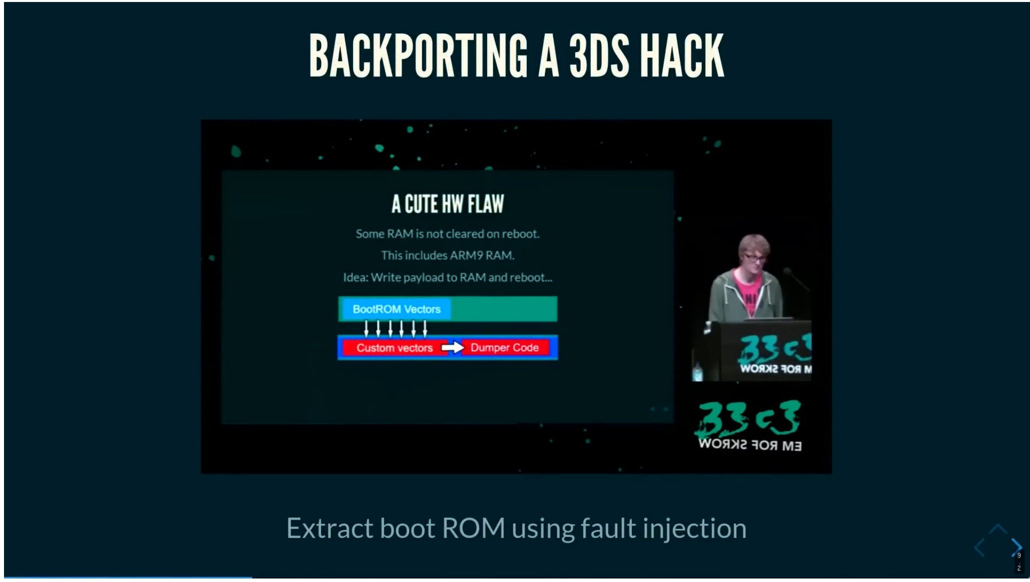
- scanlime's RAM tracer (2009)
- ... and nothing else happened



NDS HACKING

Cartridge encryption:

- First Nintendo console to use cryptography
- ... only **symmetric** cryptography



BACKPORTING A 3DS HACK

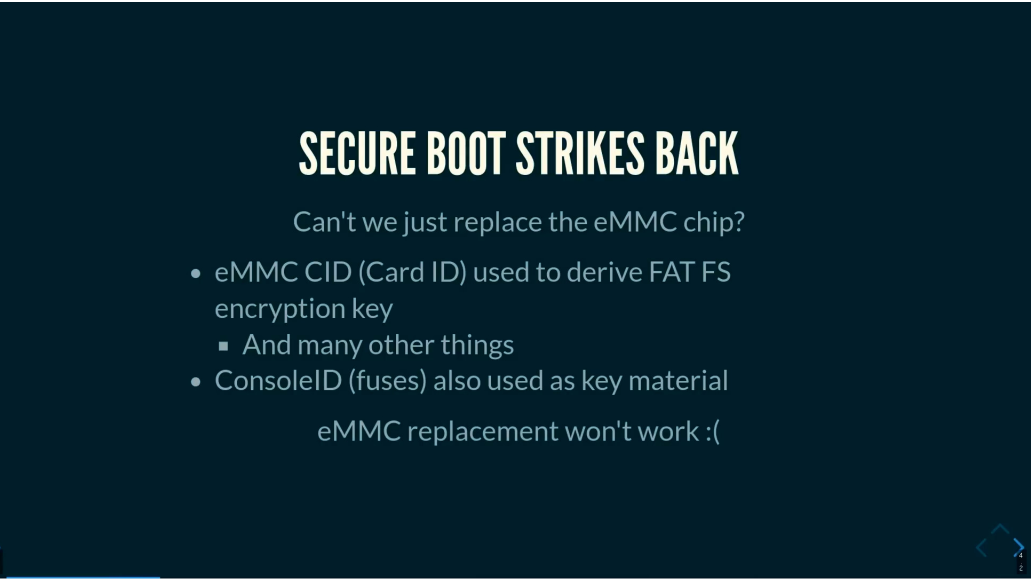
A CUTE HW FLAW

Some RAM is not cleared on reboot.

This includes ARM9 RAM.

Idea: Write payload to RAM and reboot...

Extract boot ROM using fault injection



SECURE BOOT STRIKES BACK

Can't we just replace the eMMC chip?

- eMMC CID (Card ID) used to derive FAT FS encryption key
  - And many other things
- ConsoleID (fuses) also used as key material

eMMC replacement won't work :(

---

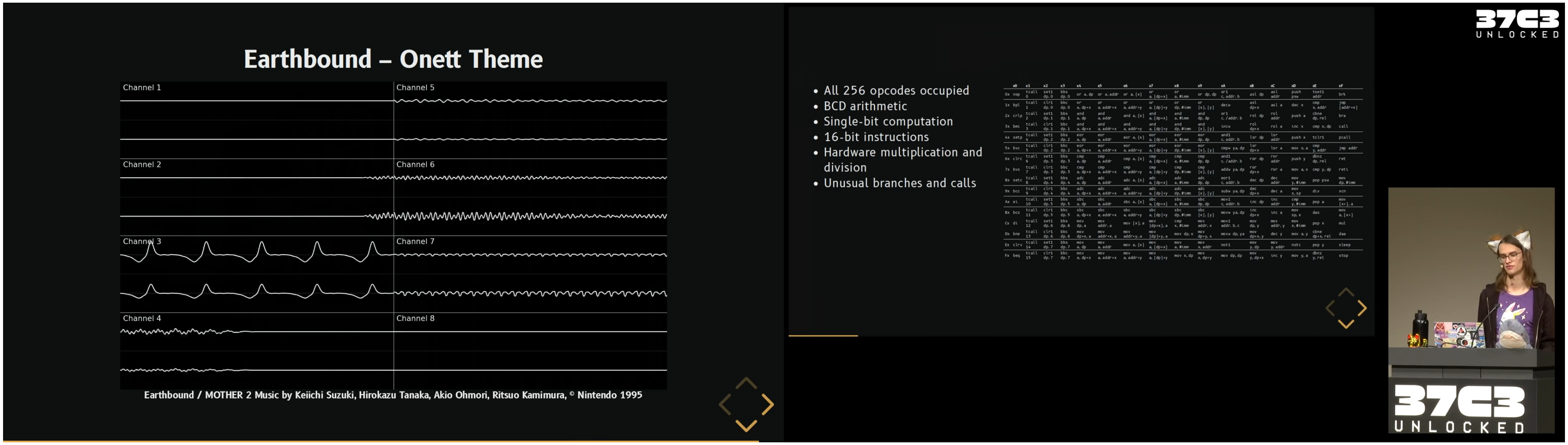
[3] note the Orwellian deployment of security language...

This highly technical talk has cryptographers, a non immediate demographic, as specialists for targets and hardware hackers. It should nonetheless be of interest to a larger public due to fundamental principles underlying it and the general logic at work. It is exemplary when it comes to demonstrating how a hack is performed from beginning to end - even when all the intermediary steps are not fully understood - that is, by relying on previous efforts, including in connected areas, and through original work - similar if not identical to how progress is achieved in science.

— “The Ultimate SPC700 Talk”

Subject of this talk was the Super Nintendo’s sound.

Like the “Nintendo hacking year xxxx” talk, this talk requires a bit of CCC history knowledge to put inside a context : It is part of a line of talks – being the “Ultimate” series – given frequently at the convention. Previous examples include : “The Ultimate Game Boy Talk” (33C3) and “The Ultimate Commodore 64 Talk” (25C3). It seems that speakers, either on their own or through encouragement by the organizers, try to take into account earlier presentations relevant to their area; again, in a manner analogous to science.



Earthbound – Onett Theme

Earthbound / MOTHER 2 Music by Keiichi Suzuki, Hirokazu Tanaka, Akio Ohmori, Ritsuo Kamimura, © Nintendo 1995

- All 256 opcodes occupied
- BCD arithmetic
- Single-bit computation
- 16-bit instructions
- Hardware multiplication and division
- Unusual branches and calls

The presenter themselves are aware of this legacy and describe the format as talks “*where we try to convey as much information about a certain architecture as possible*”. Their own contribution concerns the SPC700 and was sub-titled “The hardware behind the music of Super Mario World, Chrono Trigger, Super Metroid, and more”.

The author of this talk starts by dispelling myths around often mentioned similarities between the SPC700 and 6502 (the processor from MOS) :

> “*The architecture is often compared with the 6502, and while it was clearly, explicitly based on the 6502 by the Sony engineers who designed it, it came out very differently.*”

An example are given by the opcodes tables : “*All 256 opcodes are occupied (...) and that’s already very different from the 6502, which has a very small part of its opcode space actually occupied.*”

The speaker is the author of the `spcasm` assembler software project. Interestingly the author came from the audio side, having worked with codecs, and were not as much interested by the games or the assembler side initially. Will some gamers go the opposite direction?

The convention’s motto this year was, appropriately, “unlocked”.

Where would computer science and technology today be without transgender women and its minorities? All this year’s best talks were by them. Trans women collectively made computer science cool; offsetting even the very large negative impact of Zuckerberg, Musk and the has-been, anti-cool brotherhood of tech. All the money in the world couldn’t come close to the combination of expert science and high-fly hacking recited all the while wearing cat ears...

But, more generally this latest CCC convention illustrated the hacker ideals and how important it was they remained : The idea that a single individual, and often a collective (as we have tried to reinforce), could defeat entire corporations - be it Google or Nintendo - or governments retains a fascination that is intact. The young and old hackers continued to reaffirm the primacy of humble and subversive intelligence over dominating values of money and greed which increasingly permeate all areas of our society. It must be defended.

Special 11-2

Camille Akmut

January 13, 2024

‘Back in the Driver’s Seat : Recovering Critical Data from Tesla Autopilot Using Voltage Glitching’	Werling, Kuhnapfel, Jacob

Table 1: more selected talks from 37C3

Further explanation for the Nintendo DSi hack we felt was required :

Firstly the DSi has a bad “*erase-write lifetime*”, as the author exactly stated (read operations can’t be as bad otherwise trivial user operations would also endanger the console and lead to widespread failure...). It seemed to us that it might have been designed that way :

good read paired with bad erase and write performance was acceptable for the corporate mind since, in theory, it should only be written once i.e., by the manufacturer themselves initially; maybe this saved them some money and was even conceived as a way to restrain user freedom.

In any case, Unlaunch wasn’t a viable solution because even when following all the steps exactly there is still a risk of breaking the console, (as instructions warn), depending on age - which is often an unknown factor...

A more important issue : The fault injection worked but there was bad news later on, down the road :

Glitching of the DSi was an idea discussed on forums since 2016/2017, but “*they didn’t really get any success*”. Among others, they overlooked the presence of elements in the hardware that have a counter-acting effect.

> “*Now, in practice, if you look at the PCB there are these things. These are called decoupling capacitors. These hold a tiny amount of charge, and those will actually smooth out any sort of glitches.*”

One thing that we don’t remember the author discussing is why removing the decoupling capacitors was not an option. (The Tesla hackers who presented their research at the convention did this.)

A side note : voltage glitching has been around for a long time and is a basic method in hardware hacking. A successful voltage glitching is dependent on duration and pulse. Duration cannot be too long (as otherwise the hardware system may shut down - for lack of power supply - or reset), or too short (no effect). One must also figure out the right moment to execute it. It generally takes some efforts, from a few hours to days, including hardware modifications if needed : certain pieces of hardware may need to be removed or bypassed, that counter-interact with the intended effects, others added.

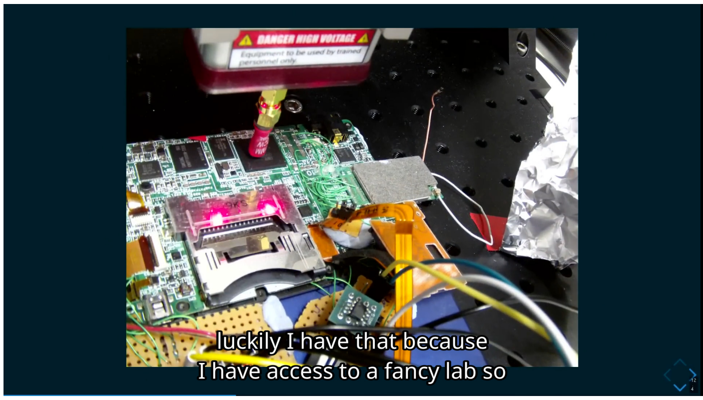
In fact voltage glitching was the main method used in another, high profile presentation of the convention. The two have definite points in common and there is a benefit in considering them together.

Fault injection can also be produced by a method called “electromagnetic fault injection”, which however requires more specialized equipment. “*Luckily I have that because I have access to a fancy lab*” the hacker merely states.[1]

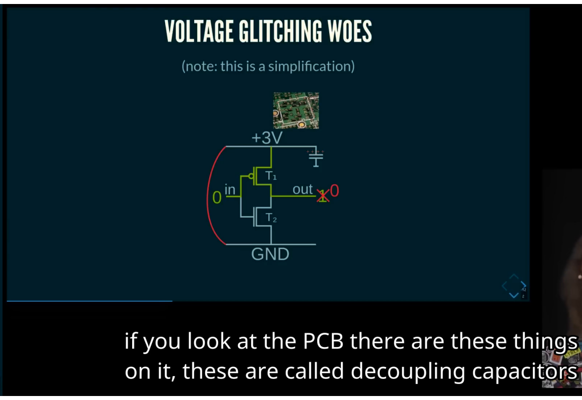
It did give access to the ARM7 component of the DSi, which unluckily did not contain the desired parts of the code, among others those related to the crytography of the console. The ARM9 contains it but it relies on RAM that does reset... This is where the idea of one core taking over the others became relevant.

> “*On the 3DS it was pretty easy, as soon as you have code execution on one of the cores you can basically take over the other cores and read out whatever they have.*”

The DSi constitutes a strange and interesting case, for historians of science and technology included, since its hack relied on knowledge derived from the 3DS, a console released after it but hacked before it...



luckily I have that because
I have access to a fancy lab so


VOLTAGE GLITCHING WOES

(note: this is a simplification)

if you look at the PCB there are these things
on it, these are called decoupling capacitors

Here is a rough attempt to recapitulate the sequence of events up to the successful hardware hack (giving access to the sought-after source code) :

---

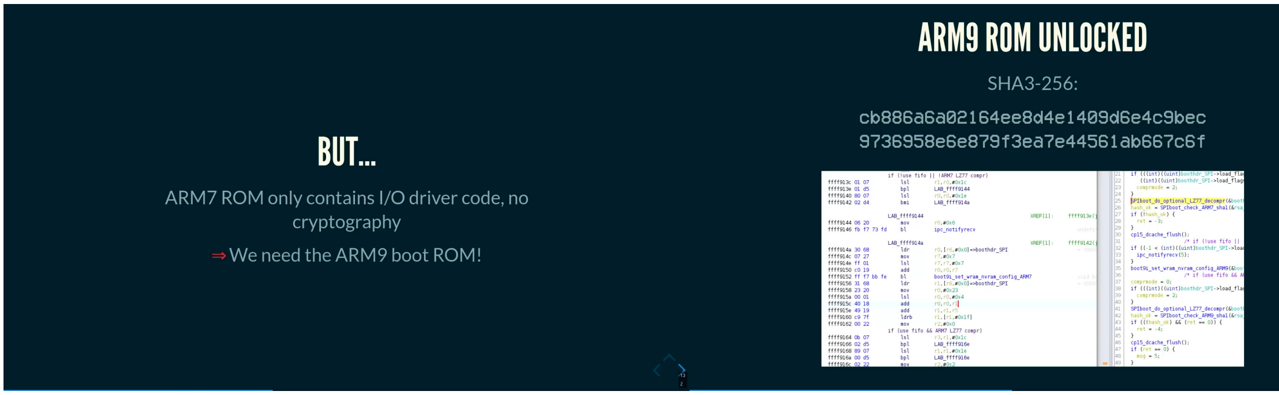
[1] Independently from this specific case, the idea of university facilities and taxes going towards console hacking instead of the usual concoction of corporate and military research is good and encouraging news! MIT, for example, is well-known among many other things for actively discouraging such acts (cf. the case of Bunny). The administrators must be of the opinion that gay console hacking should not be a distraction from the clearly more important tasks, being research done in the interest of the military-industrial complex and our corporate overlords; and, further, that this may reflect badly on its distinguished donors, being the Koch brothers and Epstein; or, maybe, it is that the administrators of MIT fear for its legacy, being the death of Aaron Swartz...

what happened	**and why it didn't work**	**time index**
Unlaunch	eMMC issues	3m
eMMC replacement	Secure boot	4m
glitching 2016-17	e.g., decoupling capacitors	9m
electromagnetic fault injection	worked but only for the ARM7	13m
one-core-takes-over-the-rest (known 3DS hack)	doesn't work on the DSi	15m
repeating the same fault injection on the ARM9	there is a RAM reset here	15m

A successful attack on the ARM9 followed. Voltage glitching was once more used but by different hackers, stuckpixel and Normmatt. The speaker was able to achieve a similar state within 1 or 2 weeks.

Quickly, once this is achieved, the presentation moves towards software considerations i.e. how to crack the encryption now that its code is available... The procedure of looking for known vulnerabilities was repeated (e.g. sighax - which we understand to also have been a part of the 33C3 presentation).

From 16m onward, readers can follow these heroic developments.



BUT...

ARM7 ROM only contains I/O driver code, no cryptography

⇒ We need the ARM9 boot ROM!

ARM9 ROM UNLOCKED

SHA3-256:

cb886a6a02164ee8d4e1409d6e4c9bec
9736958e6e879f3ea7e44561ab667c6f

Some hardware specific vocabulary :

`- IC : Integrated Circuit - PCB : Printed Circuit Board - SoC : System on a Chip`

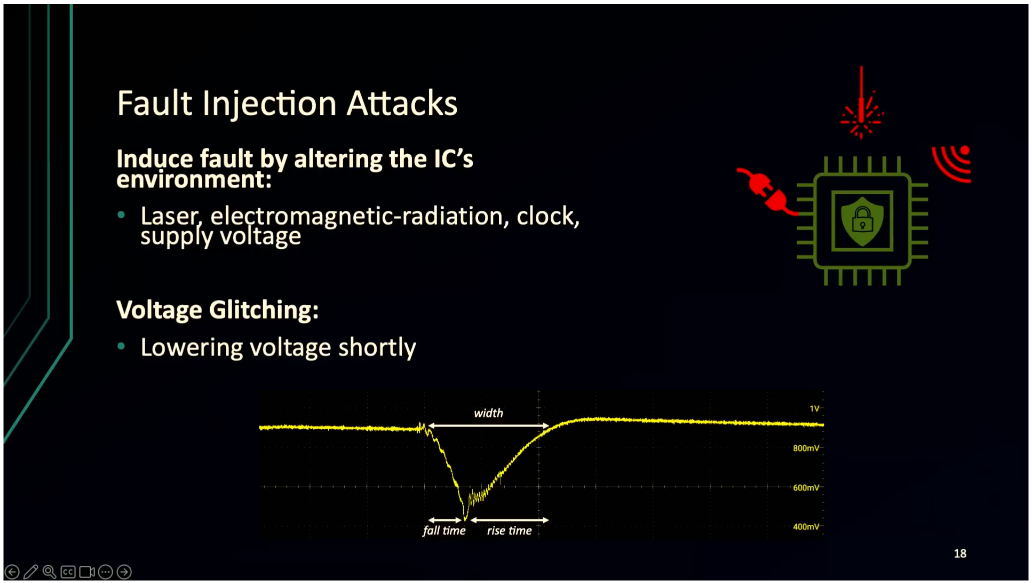
—'Back in the Driver's Seat' a.k.a. the Tesla hack

This hack was of a different kind, but not fundamentally of a different nature : Instead of cheap computers or consoles, they were attacking luxury cars (we assume requiring more funds). The group of researchers was also explicitly attached to a university [TU Berlin] and had previously published research on

AMD processor security.[2] It turns out that research proved to be useful in this case because Tesla moved to AMD processors.

Especially the segment from 12m onward is recommended, which begins with a definition for fault injection :

> "*In the case of voltage voltage glitching the supply voltage is lowered for a very short amount of time, as you can see on the picture below*"



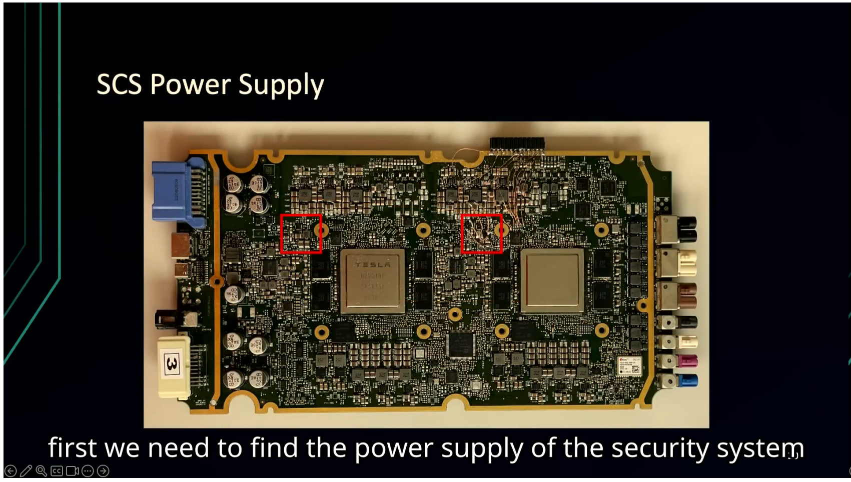
Fault Injection Attacks

Induce fault by altering the IC's environment:

- Laser, electromagnetic-radiation, clock, supply voltage

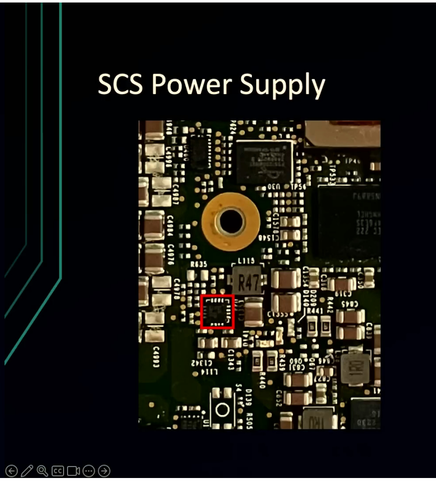
Voltage Glitching:

- Lowering voltage shortly



SCS Power Supply

first we need to find the power supply of the security system



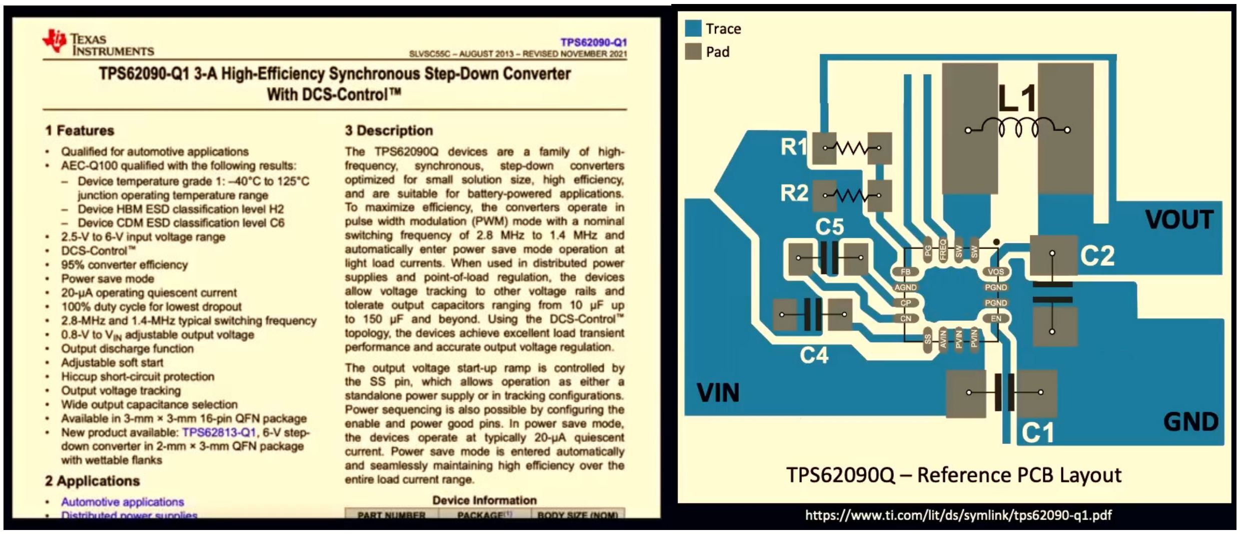
SCS Power Supply

First step in voltage glitching is, perhaps unsurprisingly, locating the power supply. Here also watching the hack's logic gradual unfolding has something satisfying : Next, they identify the chip's manufacturer and documentation for it. [T.I., TPS62090Q]

---

[2] H.N. Jacob et al.. 2021. "One glitch to rule them all".

> *"First we need to find the power supply of the security system. And, voltage regulator circuits are quite easy to find, because most of the time they consist of a small chip, an inductor and some capacitors. (...) If we zoom in a little bit, we can see this tiny chip here, which turned out to be a Texas Instruments voltage regular. The data sheet is available, and they also provide a reference PCB layout"*



TEXAS INSTRUMENTS

TPS62090-Q1

SLVSC55C – AUGUST 2013 – REVISED NOVEMBER 2021

TPS62090-Q1 3-A High-Efficiency Synchronous Step-Down Converter With DCS-Control™

1 Features

- Qualified for automotive applications
- AEC-Q100 qualified with the following results:
  - Device temperature grade 1: –40°C to 125°C junction operating temperature range
  - Device HBM ESD classification level H2
  - Device CDM ESD classification level C6
- 2.5-V to 6-V input voltage range
- DCS-Control™
- 95% converter efficiency
- Power save mode
- 20-µA operating quiescent current
- 100% duty cycle for lowest dropout
- 2.8-MHz and 1.4-MHz typical switching frequency
- 0.8-V to V_{IN} adjustable output voltage
- Output discharge function
- Adjustable soft start
- Hiccup short-circuit protection
- Output voltage tracking
- Wide output capacitance selection
- Available in 3-mm × 3-mm 16-pin QFN package
- New product available: TPS62813-Q1, 6-V step-down converter in 2-mm × 3-mm QFN package with wettable flanks

2 Applications

- Automotive applications
- Distributed power supplies

3 Description

The TPS62090Q devices are a family of high-frequency, synchronous, step-down converters optimized for small solution size, high efficiency, and are suitable for battery-powered applications. To maximize efficiency, the converters operate in pulse width modulation (PWM) mode with a nominal switching frequency of 2.8 MHz to 1.4 MHz and automatically enter power save mode operation at light load currents. When used in distributed power supplies and point-of-load regulation, the devices allow voltage tracking to other voltage rails and tolerate output capacitors ranging from 10 µF up to 150 µF and beyond. Using the DCS-Control™ topology, the devices achieve excellent load transient performance and accurate output voltage regulation.

The output voltage start-up ramp is controlled by the SS pin, which allows operation as either a standalone power supply or in tracking configurations. Power sequencing is also possible by configuring the enable and power good pins. In power save mode, the devices operate at typically 20-µA quiescent current. Power save mode is entered automatically and seamlessly maintaining high efficiency over the entire load current range.

Device Information

PART NUMBER	PACKAGE[1]	BODY SIZE (NOM)

TPS62090Q – Reference PCB Layout

https://www.ti.com/lit/ds/symlink/tps62090-q1.pdf

A problem discussed is when to trigger the glitch, in other words what delay to apply. i.e. "when the hash comparison of the root CA happens". (They mean the root certificate.) [c. 20m]

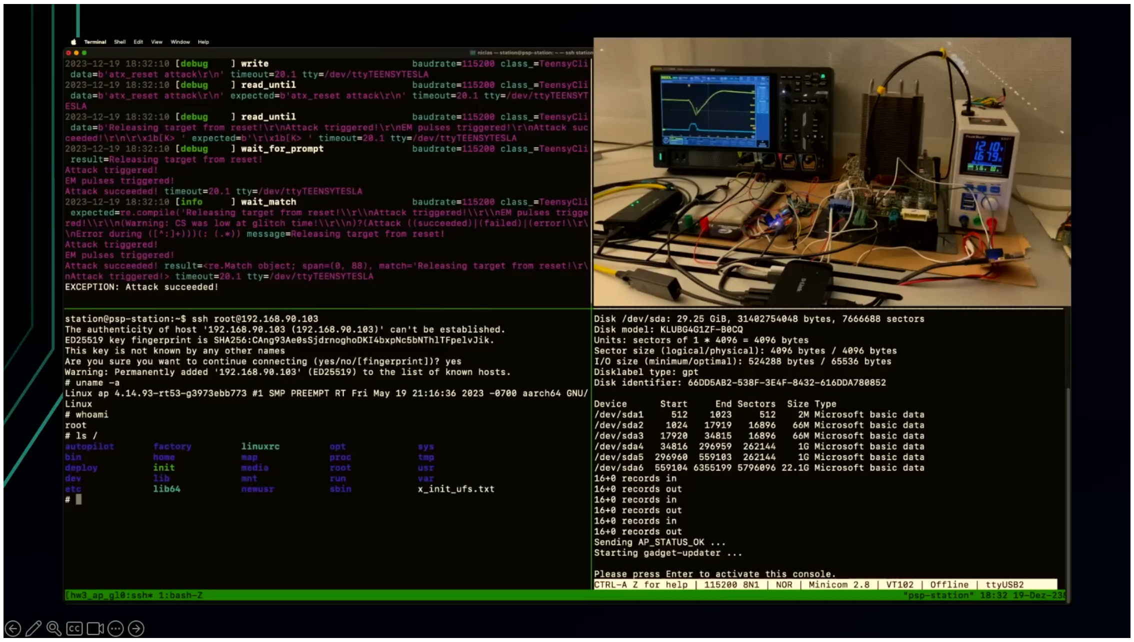
Arguably the Tesla hack is an evolved form of the DSi hack, except performed on more fancy toys... Instead of consoles they picked big cars. With many of the same steps repeated and ultimately voltage glitching being the working method.

The goal of glitching is to gain root access, which is achieved at c. 25m. A Linux system powers Tesla cars and their "security"/surveillance [GNU/Linux].

```
$whoami root $ls
```

Next to the usual bin or etc folders, there are folders called `autopilot`, `deploy`, `factory` ...

(our descriptions are of the bottom left quadrant of the below illustration)



```
2023-12-19 18:32:10 [debug    ] write                          baudrate=115200 class_=TeensyCli
 data=b'atx_reset attack\r\n' timeout=20.1 tty=/dev/ttyTEENSYTESLA
2023-12-19 18:32:10 [debug    ] read_until                     baudrate=115200 class_=TeensyCli
 data=b'atx_reset attack\r\n' expected=b'atx_reset attack\r\n' timeout=20.1 tty=/dev/ttyTEENSYT
ESLA
2023-12-19 18:32:10 [debug    ] read_until                     baudrate=115200 class_=TeensyCli
 data=b'Releasing target from reset!\r\nAttack triggered!\r\nEM pulses triggered!\r\nAttack suc
ceeded!\r\n\r\x1b[K> ' expected=b'\r\x1b[K> ' timeout=20.1 tty=/dev/ttyTEENSYTESLA
2023-12-19 18:32:10 [debug    ] wait_for_prompt                baudrate=115200 class_=TeensyCli
 result=Releasing target from reset!
Attack triggered!
EM pulses triggered!
Attack succeeded! timeout=20.1 tty=/dev/ttyTEENSYTESLA
2023-12-19 18:32:10 [info     ] wait_match                     baudrate=115200 class_=TeensyCli
 expected=re.compile('Releasing target from reset!\\r\\nAttack triggered!\\r\\nEM pulses trigge
red!\\r\\n(Warning: CS was low at glitch time!\\r\\n)?(Attack ((succeeded)|(failed)|(error!\\r\
\nError during ([^:]+)))(: (.*)) message=Releasing target from reset!
Attack triggered!
EM pulses triggered!
Attack succeeded! result=<re.Match object; span=(0, 88), match='Releasing target from reset!\r\
nAttack triggered!> timeout=20.1 tty=/dev/ttyTEENSYTESLA
EXCEPTION: Attack succeeded!
```

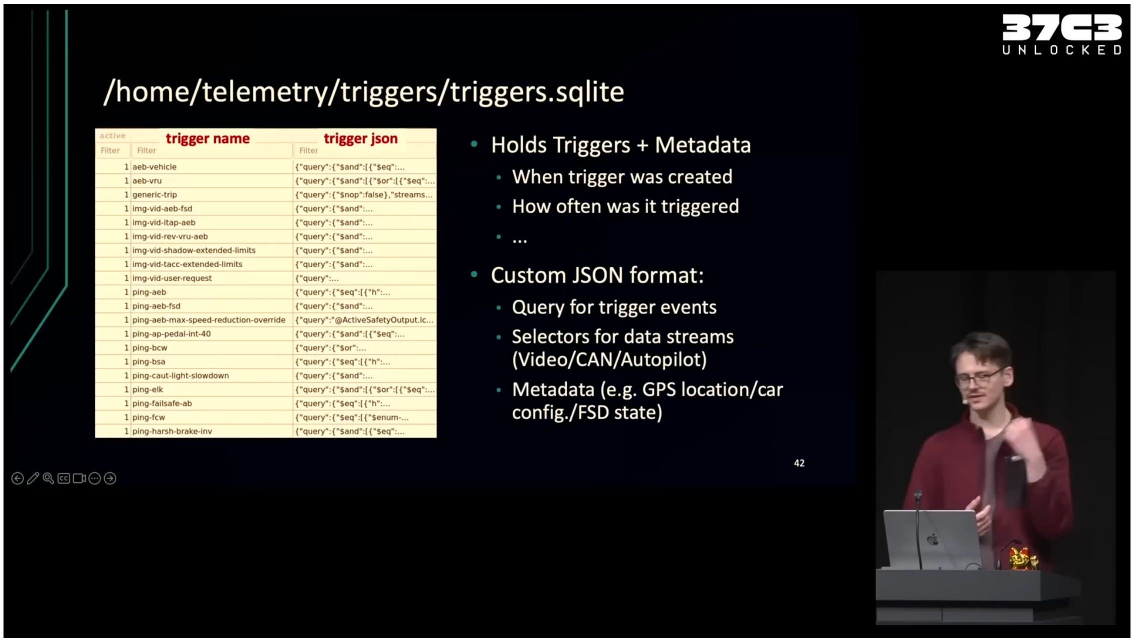
```
station@psp-station:~$ ssh root@192.168.90.103
The authenticity of host '192.168.90.103 (192.168.90.103)' can't be established.
ED25519 key fingerprint is SHA256:CAng93Ae0sSjdrnoghoDKI4bxpNc5bNThlTFpelvJik.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.90.103' (ED25519) to the list of known hosts.
# uname -a
Linux ap 4.14.93-rt53-g3973ebb773 #1 SMP PREEMPT RT Fri May 19 21:16:36 2023 -0700 aarch64 GNU/
Linux
# whoami
root
# ls /
autopilot       factory         linuxrc         opt             sys
bin             home            map             proc            tmp
deploy          init            media           root            usr
dev             lib             mnt             run             var
etc             lib64           newusr          sbin            x_init_ufs.txt
# 
[hw3_ap_gl0:ssh* 1:bash-Z
```

```
Disk /dev/sda: 29.25 GiB, 31402754048 bytes, 7666688 sectors
Disk model: KLUBG4G1ZF-B0CQ
Units: sectors of 1 * 4096 = 4096 bytes
Sector size (logical/physical): 4096 bytes / 4096 bytes
I/O size (minimum/optimal): 524288 bytes / 65536 bytes
Disklabel type: gpt
Disk identifier: 66DD5AB2-538F-3E4F-8432-616DDA780852

Device       Start     End Sectors  Size Type
/dev/sda1      512    1023     512    2M Microsoft basic data
/dev/sda2     1024   17919   16896   66M Microsoft basic data
/dev/sda3    17920   34815   16896   66M Microsoft basic data
/dev/sda4    34816  296959  262144    1G Microsoft basic data
/dev/sda5   296960  559103  262144    1G Microsoft basic data
/dev/sda6   559104 6355199 5796096 22.1G Microsoft basic data
16+0 records in
16+0 records out
16+0 records in
16+0 records out
16+0 records in
16+0 records out
Sending AP_STATUS_OK ...
Starting gadget-updater ...

Please press Enter to activate this console.
CTRL-A Z for help | 115200 8N1 | NOR | Minicom 2.8 | VT102 | Offline | ttyUSB2
                                              "psp-station" 18:32 19-Dez-23
```

Once they have gained control of the car software, they are able to describe its internals : among others a database of JSON-like language there to record events. These events, for example air bag deployments i.e. signifying accidents, can trigger mechanisms such as uploads to the “cloud”.



/home/telemetry/triggers/triggers.sqlite

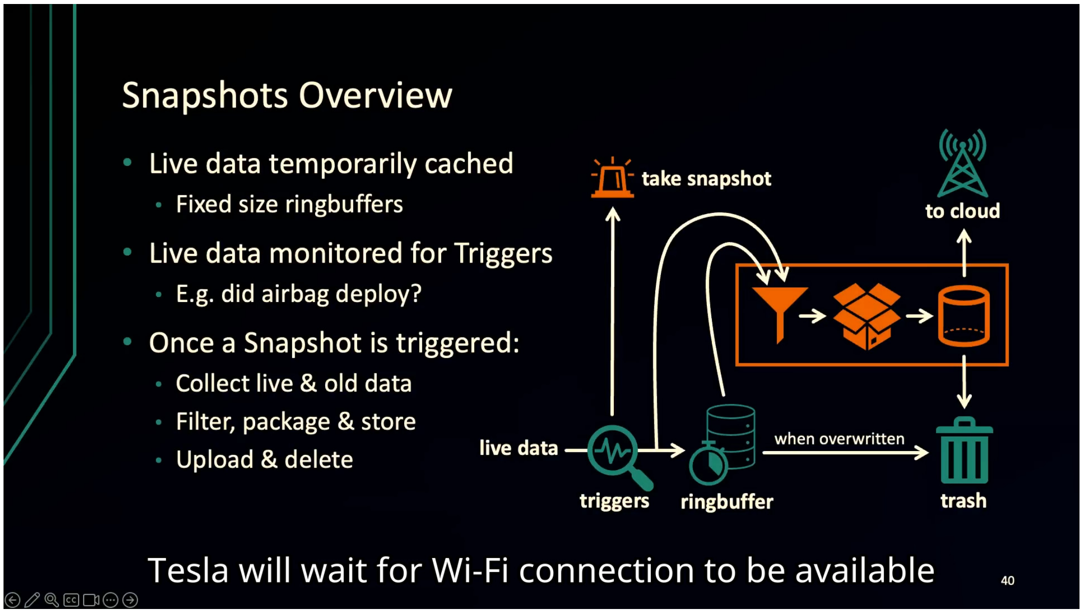
active	trigger name	trigger json
Filter	Filter	Filter
1	aeb-vehicle	{"query":{"$and":[{"$eq":...
1	aeb-vru	{"query":{"$and":[{"$or":[{"$eq":...
1	generic-trip	{"query":{"$nop":false},"streams...
1	img-vid-aeb-fsd	{"query":{"$and":...
1	img-vid-ltap-aeb	{"query":{"$and":...
1	img-vid-rev-vru-aeb	{"query":{"$and":...
1	img-vid-shadow-extended-limits	{"query":{"$and":...
1	img-vid-tacc-extended-limits	{"query":{"$and":...
1	img-vid-user-request	{"query":...
1	ping-aeb	{"query":{"$eq":[{"h":...
1	ping-aeb-fsd	{"query":{"$and":...
1	ping-aeb-max-speed-reduction-override	{"query":"@ActiveSafetyOutput.lc...
1	ping-ap-pedal-int-40	{"query":{"$and":[{"$eq":...
1	ping-bcw	{"query":{"$or":...
1	ping-bsa	{"query":{"$eq":[{"h":...
1	ping-caut-light-slowdown	{"query":{"$and":...
1	ping-elk	{"query":{"$and":[{"$or":[{"$eq":...
1	ping-failsafe-ab	{"query":{"$eq":[{"h":...
1	ping-fcw	{"query":{"$eq":[{"$enum-...
1	ping-harsh-brake-inv	{"query":{"$and":[{"$eq":...

- Holds Triggers + Metadata
  - When trigger was created
  - How often was it triggered
  - ...
- Custom JSON format:
  - Query for trigger events
  - Selectors for data streams (Video/CAN/Autopilot)
  - Metadata (e.g. GPS location/car config./FSD state)

Their research echoes previous literature on the new landscape of computerized cars in the 21st century :

They refer to a 30 Gb internal hard drive and describe how Tesla cars await Wi-Fi connection in order to periodically upload their data. The old data is then deleted to make room for new one...

> "*The issue is that this data cannot all be saved to a 30 gb universal flash storage and it can't all be uploaded and that's why Tesla only uploads selected snapshots of data and this snapshot process looks as follows*"



Snapshots Overview

- Live data temporarily cached
  - Fixed size ringbuffers
- Live data monitored for Triggers
  - E.g. did airbag deploy?
- Once a Snapshot is triggered:
  - Collect live & old data
  - Filter, package & store
  - Upload & delete

Tesla will wait for Wi-Fi connection to be available

To recall, these cars were supposed to be the disruptive solution to woes as varied as urban problems and the ecological crisis... As is usual with every round of tech innovations, they were promised to be more efficient than the public service - the horrible public transport, in this case. Here was thus the solution, stripped bare naked :

Vehicles in which near every move, sound, image is recorded are the new frontier of completely unregulated experiments that are part of a wider technological Wild West.

A series of anti-Russian, possibly anti-communist, jokes go something like this : "In Russia, you don't drive cars, cars drive you." But the real zinger is that this is a feature of American capitalism.

Special 12

Camille Akmut

January 29, 2024

(Fringe and computer science and technology.)

TV AND BONUS MATERIAL

— *Fringe* (2008-13)

Il. [1] new media infecting humans and [2] a (time) hacker, as imagined in *Fringe*

HOLT
ENVIRONMENTAL
SCIENCE

Fringe is another excellent Fox sci-fi and fantasy TV show. Fox is a strange case : It was home to some of the best series during the 1990s and 2000s, amazingly written and progressive, and simultaneously the company parent of Fox News, America's number 1 source for conservative views, propaganda and the media's premier hate machine, funded by a caricatural billionaire...

According to its staff, "the show is called fringe and it's about fringes of science and understood science"[1]. In an interview of the bonus material, Alex Kurtzman, one of its co-creators, expressed the sentiment that enough scientific basis was provided so that "You'll hopefully turn off your television and wonder if what you've just seen is possible".

Fringe contains a mix - familiar to viewers of The X-Files and similar series especially Numb3rs[2] - of military research and experiments, fringe science like sleep tanks, technology manifestos, bioterrorism, radical ecology groups, cryonics, etc.; in the midst of corporate conspiracies and three-letter agencies (at least FBI, CIA, NSA, NRO).

Fringe happened during the peak of the golden age of television shows being treated like films[3], and at a time when fast Internet home connections had just become broadly available (relevant in the case of shows involving conspiracies or with the pretension of having a "real science" background). The photography in Fringe, much like that of The X-Files, is outstanding (like that series it was partly shot in Canada).

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[1] bonus material 'The real science of Fringe', 3m.

[2] Numb3rs - a descendant of X-Files, like Fringe - already included a pairing of agent and scientist, except based on Stanford, instead of Harvard.

[3] This was in the era before Netflix, which at first attracted a lot of attention for throwing money around, but soon showed its far less generous back-hand when it came into the habit of funding a plethora of shows but canceling less popular ones after 1 or 2 seasons only; creating the foundations for the current landscape (of throwaway shows).

The idea of parallel worlds is elegantly integrated into the story and justified : Paranormal phenomena are the first signs of parallel worlds existing (as traces of visitors from other worlds).[4] It is by this tour-de-force that Fringe becomes an original work, based on the more derivative but highly satisfying first seasons (classic m-o-w.).

The overall progression of Fringe as a show is roughly unfolding as follows :

- S1-2 is a better X-Files, (where an explanation for the paranormal phenomena is still missing), than the reboot seasons.
- S3-4 are full on parallel universes, where Fringe becomes an original show of its own - the monster of the week format takes a backseat to the mythology, as the long-term story stretching across many episodes is explored; there are still many m-o-w episodes, but cleverly explored from both sides, acknowledging differences in their culture[5].
- S5 is arguably separate, with a radical change of setting, configuration (dystopia mid-21st c.).

Leonard Nimoy (of Stark Trek) plays Bell[6], but the actor playing Walter far outshines him and pretty much everyone else outside of Olivia's role.

The fifth season of Fringe is such an odd ambivalent one we feel it necessitates a commentary :

Season 5 is almost expandable, and inexplicable to some degree : Fringe's grand opera turns into a Nazi vs. Allies, Biblical good versus evil, American capitalism contra evil communism[7] parable which seemingly all Hollywood products tend to converge to; a detestable ideological soup! The dualities and cornerstones of the liberal mind here reign supreme (peace vs. hate, etc.). Not much is left at that point of the ambitious, intricate narrative of interwoven dimensions that seasons 3 and 4 so laboriously built up, based on the solid, derivative first seasons. The creators seem to have hastily tried to furnish an - impossible - ending in the space of a half-season, half-baked. Fringe could also be viewed as having ended in season 4. The beginning of the fifth season[8] is best viewed as a long movie, similar to X-Files' lesser intermission films - which fans do not hold to the same standards, don't view to be in the same category or don't have the same esteem for.

In fact the beginning of the fifth season differs little from the bulk of action movies for teenagers and their parents, usually starring a ridiculously coiffed Nicholas Cage trying to save the world... It differs so greatly in quality from the preceding story that it becomes a caricature and can be considered only separate. The characters themselves are barely recognizable : Olivia has been turned into a mature power woman who combines deadly adventures with managing motherhood, that soccer moms will no doubt be able to identify with on some level, while Etta is a purely engineered - straight out of the Disney, Nickelodeon fabric and assembly line - heroine for the female demographic, broadly cut circa 5 to 21, whose complexity of character resides in the fact that she kicks ass but also remains fashionable during times of apocalypse dystopia, you see... Fauxlivia smiles when she sees that Chelsea Clinton is on course to become the first female president. Good lord! Even Walter is diminished, who is now just a nice if irritable grandpa, with bad memory, who likes candies...

---

[4] as per a passage from the manifesto (e.g., ep. 14)

[5] many episodes still correspond to the m-o-w format : e.g., season 3 episodes 2, 3, 5, 6, 7, 9, 14 (ghosts, haunted building) + season 4 episodes 6, 7, 10, 11, 16 ...

[6] A finer detail : When Leonard Nimoy makes a special guest appearance at the end of season 1, in the last episode, an earlier encounter with a conspiracy theorist - whose opinion was that The Pattern is really a fight between Vulcans and other races of Star Trek, dismissed - is lent a new, humorous perspective.

[7] The introduction sequence now, laughably, even lists "ownership" next to "joy"...

[8] episodes 1 to 8 correspond about to what we are describing [forming an overlong, 4+ hour movie]. S5e9 (which addresses some of the more obvious left-over questions, mainly Weiss and Walter's lab assistant) is very strong and it picks up from there.

Fringe feels a little disjointed, with several parts not fitting quite with the others (the pilot is different from season 1 and 2, which are themselves different from 3 and 4, followed by 5) - but this somehow fits and even benefits the theme of colliding universes and worlds and personalities existing in multiple versions.

Fringe's disappointment at the turn of season 4 and 5 is not for lack of relevancy of its ecological theme, on the contrary. Properly introduced, it would have been a masterful ending, but as it stands it is largely disconnected from previous events, with too many loose ends. (What happened to ZFT? The First People? Sam Weiss? Here the missing 12 episodes, forming a full season, are indeed sorely missed.) The lack of answers is somehow also fitting especially where Walter's assistant is concerned.

There is a complete lack of LGBT in Fringe that strikes as bizarre and eery when viewed today, if not already then; and is a fringe case in itself. In the future imagined in Fringe everything is possible, the creators' imagination cannot be faulted, from transformations into porcupines to flying beasts...; everything except for the possibility of homosexual relationships. That being said everyone becomes asexual and aromantic by the time of the 27th century and non-physical or non-romantic reproduction.

Finally, on the topic of diverse representations : Astrid studied linguistics with a minor in computer science and has long been fascinated with cryptology. She has tinkered with computers since a child. She is usually the first person consulted when breaking codes or in computer-related matters.

***

The following notes focus mainly on the relationships between *Fringe* and computer science and technology, with additional information given for general introduction and context.

Like other works of dystopian science-fiction, Fringe's world is one where traditional politics and the entire reformist apparatus are surprisingly absent, and instead action and history are driven by a combination of two forces : the Military and Defense[9], on one hand, and large corporations on the other (in particular a technology mega corporation called Massive Dynamic, said to be one of the 10 largest economic entities in the world). Technology cannot be regulated anymore : it is too advanced, the companies are too powerful, and the dependency of the State on private research has become too big.

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[9] Fringe div. are FBI agents under Homeland security in one reality (as per Fauxlivia's report); and a part of the DoD in the other world.

A brilliant and troubling aspect of Fringe is that while it appears at first to be set in our reality, there are subtle and not-so subtle indications for it taking place in some alternate dimension with many things identical but technology and capitalism accelerated, by 50 or a 100 years ahead of ours. Among others this is achieved by the super-imposition of giant buildings over familiar landscapes in cities like Boston or N.Y. and also the inclusion of advanced technologies on occasion such as Nina Sharp's robotic arm. Companies have grown to levels of power similar to the most powerful of States; in areas like science and technology they are superior, creating a big dependency (which the companies leverage quid pro quo to obtain State privileges e.g. national secrets). They have private armies - as was imagined in cyberpunk works such as the original Cyberpunk board games.

Nina - a mix of Sheryl Sandberg and Hillary Clinton, Thatcher[10] - who is acting CEO of Massive Dynamic, explains the rules of the game in the first episodes. Charlie at the beginning of the series emphasizes how this has created a new setting where agencies, like the FBI, are weak.

In the alternate universe, a crisis has turned the US into a high security, surveillance state : 9/11 did not take down the Twin towers, but an ecological crisis served a similar function ("natural disasters" have become a daily occurrence). Most representative for this world is the implementation of a form of universal, ubiquitous identification - called "Show me" - needed in all aspects of life : including, for example, public transportation which cannot be accessed otherwise.

Fringe is largely set in Massachusetts, a State that plays an important role in the history of computer science and technology, hackers. For example Walter "Never liked Allston. Arlington either, for that matter." The major other city is New York - where Massive Dynamic is headquarted.

As Fringe progresses, hacking becomes less about computers - as we understand them now - and turns into hacking of space and time, laws of physics and ultimately reality itself. Hacking happens at such a high level now, and requires profound knowledge of many disciplines, that it is almost entirely conducted by mathematicians, physicists and biologists/chemists, many geniuses or advanced professors. Among them : Walter, former chair of biochem. at Harvard, his partner Bell, the love-torn MIT time-traveling professor, the female mathematician fighting Alzheimer's etc. Hacking hence is now the domain of science at its highest and most uncertain, chaotic level.

This new setting recalls the figure of White Rose in Mr. Robot and her devastating, belittling claim : you hack computers, I hack time.

In this novel setting the entire security and IT profession as it exists currently, with its assorted Java coders and "clean code" programmers, is completely irrelevant. At no moment do they make any difference or have any impact on this new world; and are little more than ants moving somewhere in the background.

---

[10] (In other universes, in which she became an adoptive parent in part., she is much different, kinder.

Fringe contains numerous bitter critiques of corporations and one could even believe capitalism (which we perceived to be stronger or more poignant in season 1). In a deja vu - which announces the parallel worlds plot development - Broyles is seen making fun of what he calls ”the corporate mind” and its tendency towards quid pro quo, pat-on-the-back arrangements. In season 4[11], during a nanotechnology talk given to what looks like a government crowd, Nina asserts the prerogative of the enterprise to dismiss moral concerns : We make the tech, not how it is used. The divorce of technology from ethics at this point is fully realized in the context of the modern tech company (represented by MM). For being from 2011, the fourth season segment in question was pretty forward looking.

Tesla's or Elon Musk's brain implant device looks to be straight from this show (where it is called a neuralink).

For much of season 1, the show was sponsored by AT&T (“promotional consideration paid for”, per end credits)[12]. Microsoft was one of the sponsors of season 2[13], where its operating system could be seen on some of the computers. Sprint was a sponsor of season 3 and 4[14].[15]

Season 4 further makes fun of the US mainstream tendency to blame everything on China (and alternatively Russia, Iran etc.). When Walter concludes that a certain piece of technology isn't ”from here”, Lee, a new FBI agent, infers China even though the alternate USA is meant, a context obvious both to participants in the conversation and viewers.

To give some examples of the new circumstances of Fringe's future, world :
- a computer virus that jumps to humans; as explained by one of the staff,

> *In ”Power Hungry” we talked about the idea of a computer virus able to jump to humans. And through kneading that idea over and over again... we sort of came up the idea of a character (...) able to control electronic or computer-driven devices.*[16]

- uploading a person's mind to a computer (Bell)
- “a designer virus programmed to rewrite ... DNA” (i.e. the case of Marshall Bowman in S4)
- In season 4, the difficulty level is raised as the shapeshifters - now in a perfected version - are not just a mix of organic and machine anymore, but human thus preventing their detection by blood; later[17], it is revealed they have the additional ability to switch between assumed identities.

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[11] s4e4 9m

[12] plus the season 2 episode 11 (in particular the presence of Charlie and the old ”Made in NY” logo make obvious that this episode is a season 1 episode delayed / pushed back).

[13] s2e16-23

[14] e.g., s3e16-22 and s4e1-21

[15] KFC was a sponsor in season 3. Nissan replaced Ford in season 4 (as the main vehicles of the Fringe division). Season 5 did not have similar credit sections as far as we could tell.

[16] bonus material

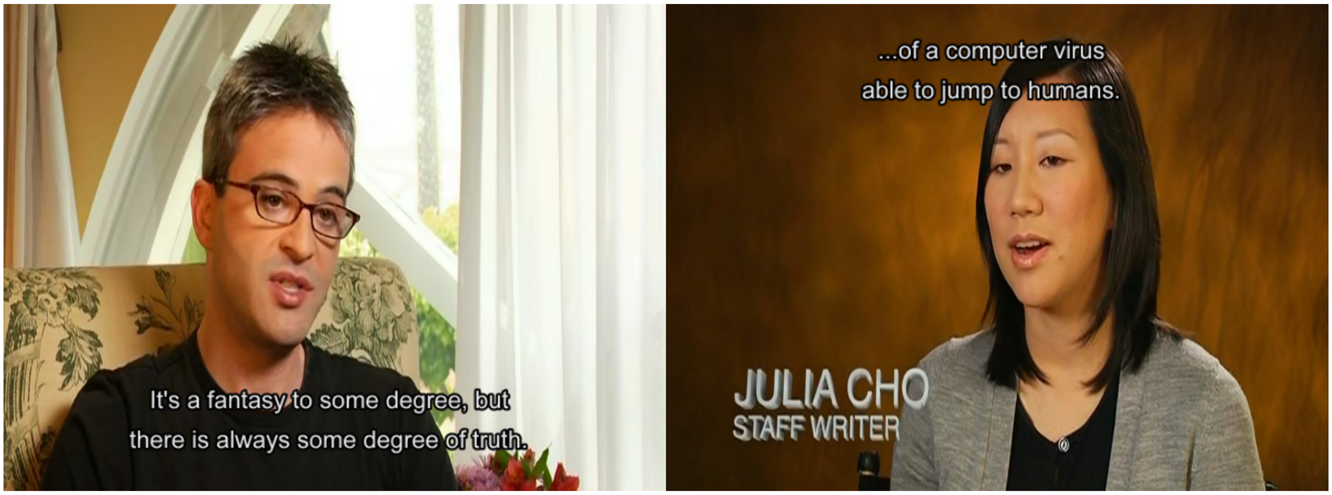
[17] s4e5 28m dialogue

- At the end hacking even presupposes making sense of future unknown technology, based on a different state of science : in season 5, the successful detournement of the portal-opening cubes of the Observers, against the occupying force, for example is a good case.

A potent, final point made in Fringe is that the technological advancement of the Observers was accompanied by a loss in humanity; they have ”human roots”. At a physiological level this is explained by an evolution of the brain which came at the cost of its emotion functions - this change was designed and conscious. In other words, programmed evolution and the ”sacrifice [of] emotion for intelligence” (S5E5, 8 and 11).

e1	technology cannot be regulated anymore
e1/2(?)	Walter worked on DARPA projects
e1/2(?)	Massive Dynamics has private armies
e2	rapid aging / soldier cultivation
e3 27m	ep. 3 is about a (secure) communications network [The Ghost Network]
e4	person who can control electronic devices [Power Hungry]
e6	human weapons
e6 38m	NRO
e7 11m	Astrid studied cryptology; Ceasar shift
e8 14m	consulting for JPL on Defense contract
e8	the evil woman from ep. 8 is, unsurprisingly, a neurobiologist from MIT
e10 25m	Fibonacci sequence
e12	computer media that jump to humans
e12 11m	“a huge file” 657mb
e12 7m	Astrid : linguistics major, computer sc. minor (see also e2/3?)
e13	human animal hybrid ‘designer viruses’
e14	anti-tech manifesto
e16	animal rights activists, genetic hybrids
e17	contagious emotions
e19	spontaneous human combustion
e19 10m	Massive Dynamic : Defense department’s largest contractor
s2e1;4	shape-shifters (introduction)
s2e3	human bomb
s2e7	ESP, mind-control kid (angsty teen)
S3E19 13m	uploading a person’s mind to a computer
s4e16	‘designer virus’ (continuation)
s2e18	MIT (time-traveling scientist) [White Tulip]
s4e11	MIT (another professor gone rogue...)
s4e15	they order equipment from MIT (video decelerator)

Table 1: mixed viewing notes


It's a fantasy to some degree, but
there is always some degree of truth.
...of a computer virus
able to jump to humans.
JULIA CHO
STAFF WRITER

Il. bonus material 'Behind the real science of Fringe'

The representation of technology in Fringe includes IP addresses outside of the possible ranges (as in The X-Files and many other series, which is done for safety reasons we imagine), the mention of "*a huge file*" that was downloaded whose size in excess of 600 mb is supposed to be impressive - yet, already badly outdated by today's standards (a problem for a science-fiction show) - and a 'enhance' trope scene which, as far as we recall, for once is prudent.

At a philosophical level, the question at the heart of Fringe is the old one of humanity specifically updated to the context of an advanced technological society. To a bleak possible future, it opposes love, which is the big overarching theme of this series - understood in a large Lewis-like sense, including patriarchal love in particular - and sacrifice for causes bigger than oneself.

There is a definite religious element and penchant in Fringe, which we must point out although kept to a minimum in our review : religion being the other answer and opposing set of values to a totalitarian machine future, and cold bureaucratic reason and science disconnected from greater good. (In the communist view, religion of course gives a false representation of the world.)

Special 13

Camille Akmut

January 30, 2024

BOOKS : HARDWARE HACKING (FAULT INJ. and CHINA ETHNOGRAPHY)

— bunnie. 2003. *Hacking the Xbox.* No Starch Press.

— bunnie. 2017. *The Hardware Hacker : Adventures in Making and Breaking Hardware.* No Starch Press.

— van Woundenberg / O'Flynn. 2022. *The Hardware Hacking Handbook.* No Starch Press.

When considering the available literature our first reflex was to have a look at bunnie's *Hacking the Xbox.* Its index contains neither "fault injection" nor "voltage glitching" (nor does the inside, as far as we could tell). In the process we found an interesting passage, that does provide some context :

> "*Xbox represents the first significant attempt made by a vendor to cryptographically secure a pc. Despite the lessons learned from the Xbox experience, future secure PC implementations are still at risk of having hardware security weaknesses*" [p. 148]

This would make the Xbox an even more cursed console than we thought.[1]

A recent monograph on hardware hacking, however, has been released by the same publisher, *The Hardware Hacking Handbook* (c. 800 p.). Chapter 4 f. are entirely dedicated to these topics, with enlightening definitions and explanations.

> "Fault injection is the art and science of circumventing security mechanisms by causing small hardware corruptions during the execution of normal device functions. Fault injection is potentially more of a risk to system security than side-channel analysis. Whereas side-channel analysis targets cryptographic keys, with fault injection, you can attack various other security mechanisms, such as Secure Boot, which besides enabling full system control may enable dumping keys directly from memory without the complexities of side-channel analysis."

and

> "Modern devices often boot from firmware images stored in flash memory. To prevent booting from hacked firmware images, device manufacturers sign them digitally, and the signature is stored next to the firmware image. When the device boots, the firmware image is

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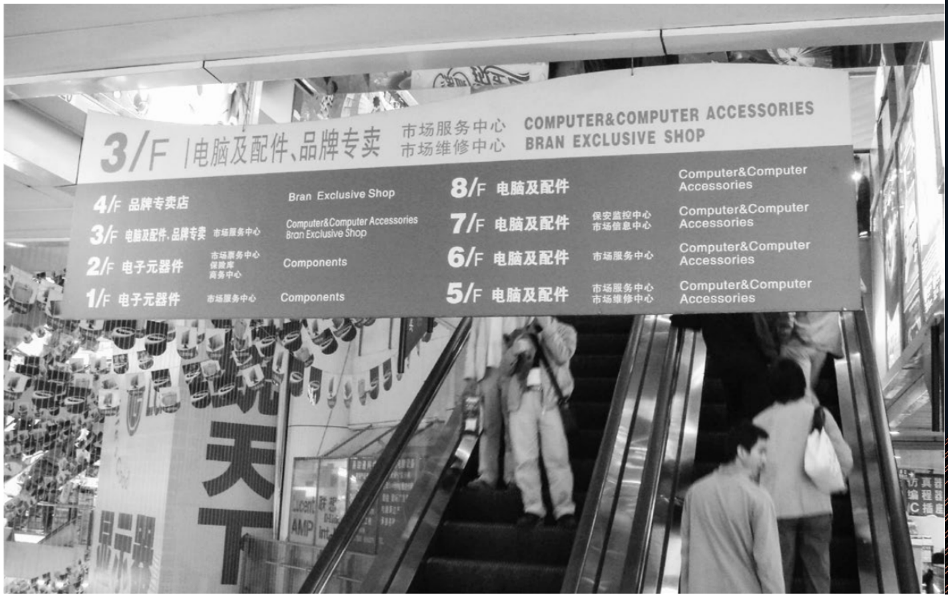
[1] (in addition to being the ultimate bro console, as the home of Halo - omfg, I just sniped you dude!.. - and grotesque, big-breasted fighting and volley-ball games... let alone Microsoft's.)

> inspected, and the associated signature is verified using a public key linked to the device manufacturer. Only when the signature checks out is the device allowed to boot. The verification is cryptographically secured, but eventually the device must make a binary decision: to boot or not to boot. In the device's boot software, this decision typically boils down to a conditional jump instruction. Aiming the perfect fault injector at this conditional jump can induce a "valid" result, even though the image may have been modified. Though software can be complex, a controlled fault in a single location can compromise all the security."

Topics covered include voltage fault injection and electromagnetic fault injection (ch. 5).

bunnie's more recent book, *The Hardware Hacker*, is at least in the first half an ethnography of the hardware industry and landscape in China, especially Shenzhen. He calls the SEG Electronics Market essentially the new Akihabara, "the new electronics mecca".

The market occupies the bottom floors of the giant, futuristic SEG Plaza building, which could easily fit in a cyberpunk game, as the headquarters of some mega-corp – at least the 8 first floors (as a photo in the book suggests, but it may be more now).


3/F 电脑及配件、品牌专卖
市场服务中心
市场维修中心
COMPUTER&COMPUTER ACCESSORIES
BRAN EXCLUSIVE SHOP
4/F 品牌专卖店
Bran Exclusive Shop
3/F 电脑及配件、品牌专卖
市场服务中心
Computer&Computer Accessories
Bran Exclusive Shop
2/F 电子元器件
市场服务中心
保险库
商务中心
Components
1/F 电子元器件
市场服务中心
Components
8/F 电脑及配件
Computer&Computer Accessories
7/F 电脑及配件
保安监控中心
市场信息中心
Computer&Computer Accessories
6/F 电脑及配件
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市场维修中心
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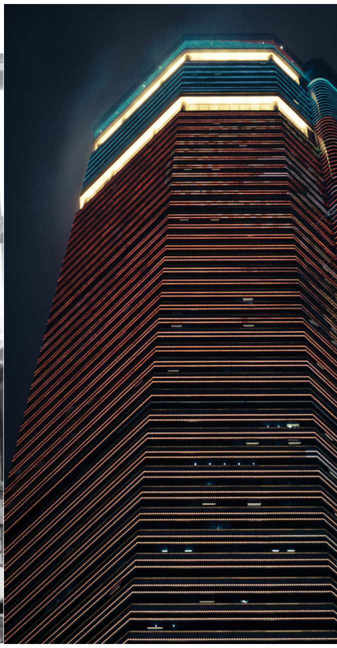


In one episode, he is surprised to find books, which are classics in his field, sold at extremely low prices in a nearby bookstore, e.g. *The Design of CMOS*

Radio-Frequency Integrated Circuits by Lee, extrapolating :

> “*In China, knowledge is cheap. Components are cheap. The knowledge in the books at the Shenzhen Bookstore was the Real Deal, the parts to use that knowledge are down the street at SEG, and within an hour’s drive north are probably 200 factories that can take any electronics idea and pump it out by the literal boatload. These are no backward factories, either. With my own eyes, I saw name-brand, 1,550-nanometer, single-mode, long-haul, fiber-optic transceivers being built and tested there. Shenzhen is fertile ground*”

He goes on commenting, further :

> “*Shenzhen has the pregnant feel of the swapfests in Silicon Valley back in the ’80s, when all the big companies were just being founded and starting up, except magnified by 25 years of progress in Moore’s law and the speed of information flow via the internet. In this city of 12 million people, most are involved in tech or manufacturing, many are learning English, and all of them are willing to work hard.*”

photo credits [1] bunnie 2003 [2] Robert Anders CC BY 2.0

NEWS

— “NHS England gives key role in handling patient data to US spy tech firm Palantir” *The Guardian*, Nov. 20 2023.

> Exclusive: Company that works with intelligence services wins £480m contract in joint bid with Accenture
>
> The NHS is to hand a key role in handling patient data and share of a £480m contract to the US spy technology firm Palantir this week, the Guardian can reveal.
>
> NHS England is set to confirm that Palantir’s joint bid with professional services company Accenture to operate the NHS’s new “federated data platform” (FDP) has been successful.
>
> It is preparing to make an announcement on Tuesday that is likely to spark fierce debate about the safety of patient data, public trust in the NHS and Palantir’s suitability to be involved in the FDP. The construction of the platform is the biggest IT contract the NHS has ever awarded.

The contract will be for five years but could be extended to seven.

The platform is designed to help individual hospital trusts and NHS integrated care systems – regional groupings of trusts – share information and “talk” to each other more easily.

NHS bosses and Prof Sir Chris Whitty, England’s chief medical officer, insist that the FDP will improve patient care and stop patients having to explain to multiple different staff what is wrong with them.

Palantir is best known for its work with intelligence and military agencies in the US, UK and elsewhere, such as the CIA. The firm gained a foothold in the NHS in March 2020 when, at the government’s invitation, it began analysing huge amounts of health service data to help with the official response to the unfolding Covid pandemic.

Peter Thiel, the billionaire chair and founder of Palantir, was criticised in January after he told an Oxford Union debate that British people’s deep affection for the NHS amounted to “Stockholm syndrome”.

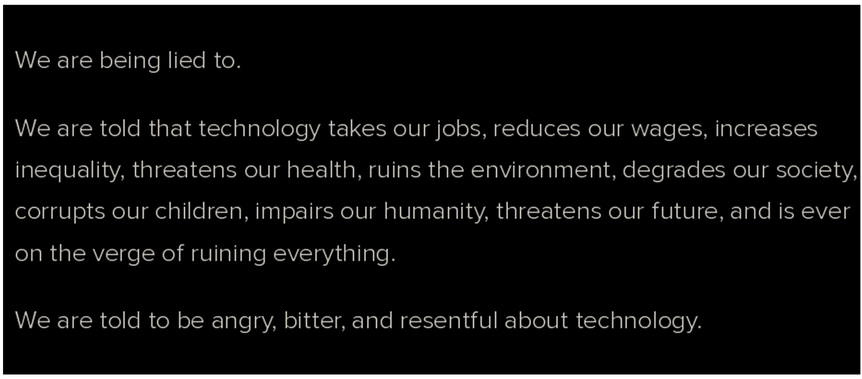
At the debate Thiel, who backed Donald Trump’s successful bid for the White House in 2016 and became part of his post-election transition team, also said of the NHS that “in theory, you just rip the whole thing from the ground and start over”. He also claimed the NHS “makes people sick”.

NHS England also received bids for the FDP from Quantexa, a British company, in tandem with IBM, and from Oracle Cerner. Palantir already helps the NHS process data and works for the UK Ministry of Defence.

Special 14

Camille Akmut

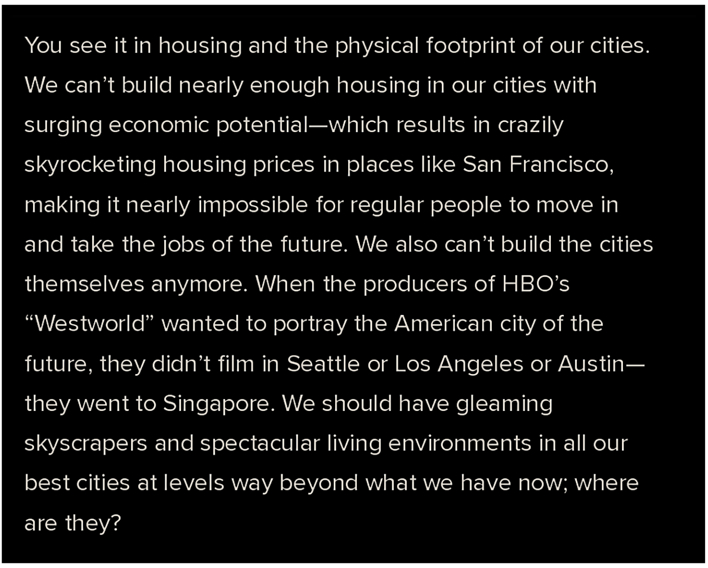
January 31, 2024



We are being lied to.

We are told that technology takes our jobs, reduces our wages, increases inequality, threatens our health, ruins the environment, degrades our society, corrupts our children, impairs our humanity, threatens our future, and is ever on the verge of ruining everything.

We are told to be angry, bitter, and resentful about technology.



You see it in housing and the physical footprint of our cities. We can't build nearly enough housing in our cities with surging economic potential—which results in crazily skyrocketing housing prices in places like San Francisco, making it nearly impossible for regular people to move in and take the jobs of the future. We also can't build the cities themselves anymore. When the producers of HBO's "Westworld" wanted to portray the American city of the future, they didn't film in Seattle or Los Angeles or Austin—they went to Singapore. We should have gleaming skyscrapers and spectacular living environments in all our best cities at levels way beyond what we have now; where are they?

Illustration : examples of the billionaire / tech blog

[1] The Techno-Optimist Manifesto, October 16, 2023
[2] It's Time to Build, April 18, 2020
by Marc Andreessen

PRIMARY SOURCE : BILLIONAIRE BLOG

The millionaire or billionaire blog, a peculiar form of writing of the late 20th and early 21st centuries, counts certainly among the most grotesque developments of our era; a literary genre and spac where technology entrepreneurs share their best thoughts with the world and the lower realms of humanity; displaying regularly a disconnection from common concerns and basic democratic ideas to a dangerous degree.

Among the heavyweights of the new literature are Marc Andreessen (*a16z.com*) and Paul Graham.

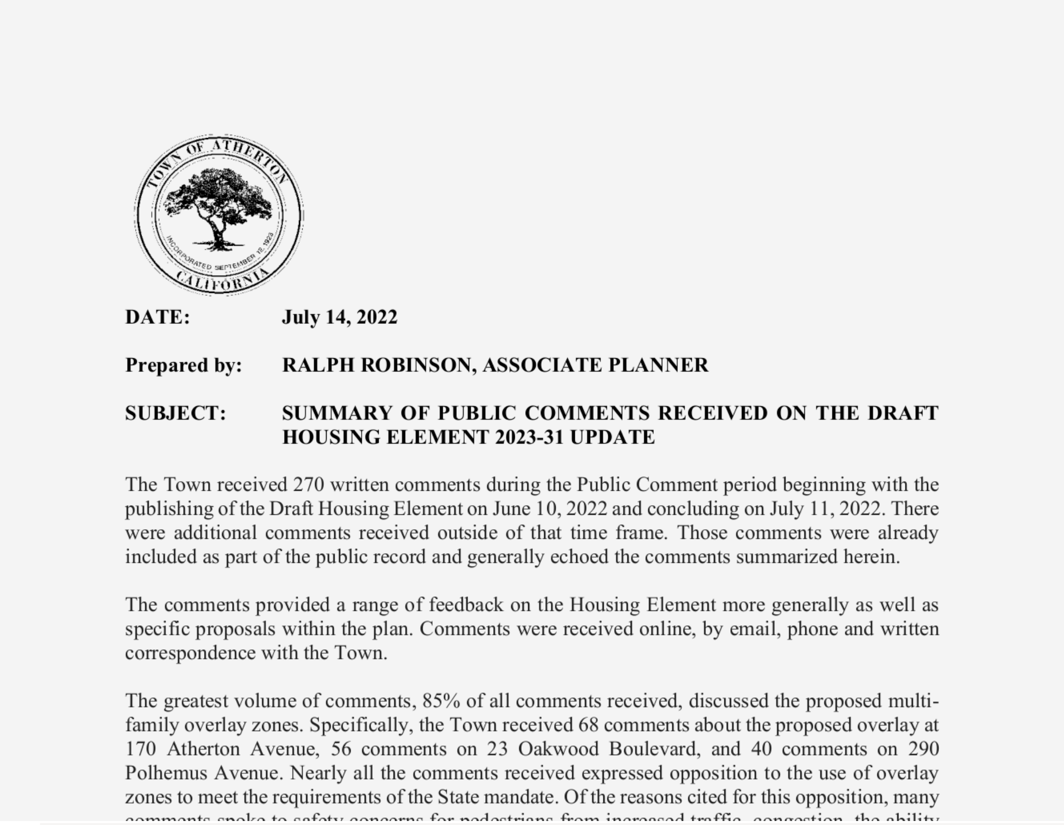
In the past tycoons and dynasties of course simply bought entire newspapers (e.g., the New York Times or Bezos' journal)... This had multiple advantages, primarily that their views, relayed by third-party journalists, could still appear neutral.

e.g., "Weapons of mass destruction in Irak", "Inflation forces companies to sacrifice, cut backs on labor expected", "Opinion: enough with the Nanny State" etc. Journalists were hired for their cooperation and conformance abilities, often recruited from a small pool of elite universities and/or families, where a beneficial molding had already taken place.

But, the new elites of our age — from venture capitalists to technology executives — aren't content with this solution, and instead prefer to communicate their ideas directly in the form of blogs; hence giving rise to the billionaire tech blog. It seems that some of them even aspire to philosopher or great thinker status;

Something that the old format of bought-for-newspapers was not quite suitable for, although it continued to have its benefits and uses (in forms ranging from book reviews, "exclusive" interviews to barely veiled publicity passed as portraits; leading to the apologia characteristic of the mainstream and specialized press of the 1980s to 2010s, at least where technology is concerned...).

PRIMARY SOURCE : CITY RECORDS



DATE: **July 14, 2022**

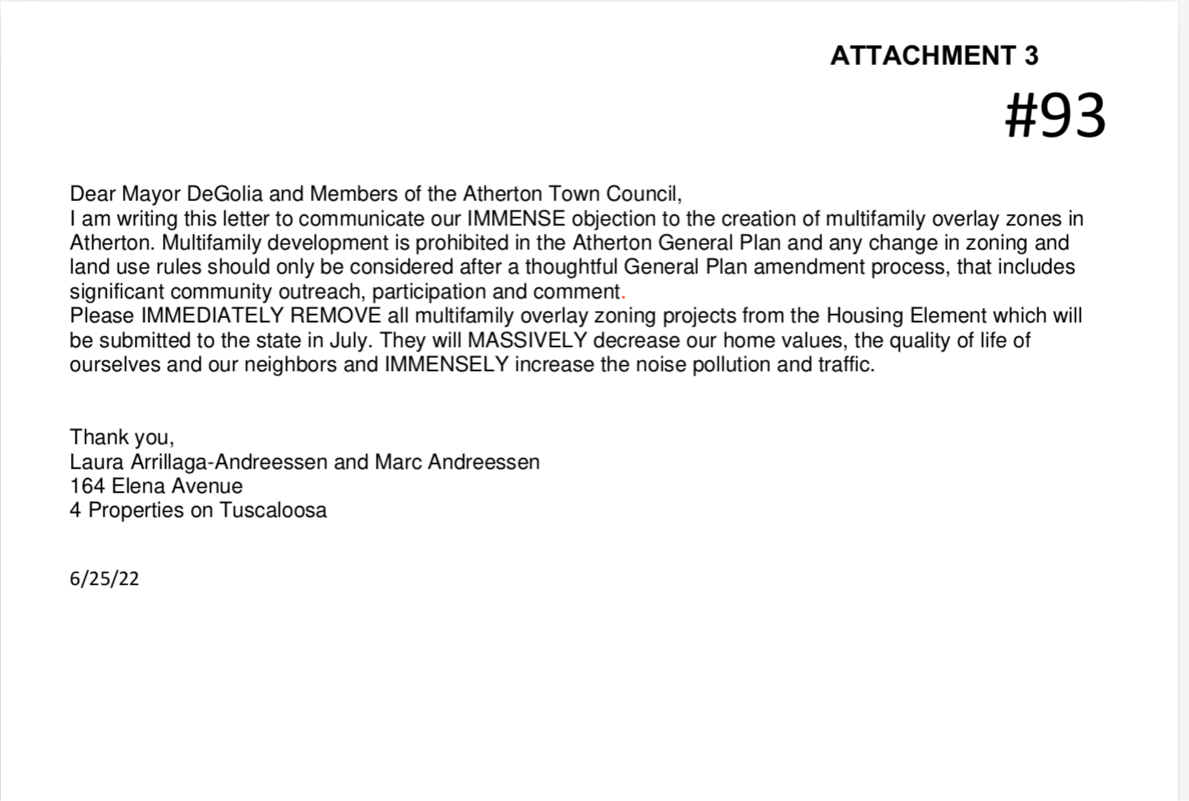
Prepared by: **RALPH ROBINSON, ASSOCIATE PLANNER**

SUBJECT: **SUMMARY OF PUBLIC COMMENTS RECEIVED ON THE DRAFT HOUSING ELEMENT 2023-31 UPDATE**

The Town received 270 written comments during the Public Comment period beginning with the publishing of the Draft Housing Element on June 10, 2022 and concluding on July 11, 2022. There were additional comments received outside of that time frame. Those comments were already included as part of the public record and generally echoed the comments summarized herein.

The comments provided a range of feedback on the Housing Element more generally as well as specific proposals within the plan. Comments were received online, by email, phone and written correspondence with the Town.

The greatest volume of comments, 85% of all comments received, discussed the proposed multi-family overlay zones. Specifically, the Town received 68 comments about the proposed overlay at 170 Atherton Avenue, 56 comments on 23 Oakwood Boulevard, and 40 comments on 290 Polhemus Avenue. Nearly all the comments received expressed opposition to the use of overlay zones to meet the requirements of the State mandate. Of the reasons cited for this opposition, many comments spoke to safety concerns for pedestrians from increased traffic, congestion, the ability



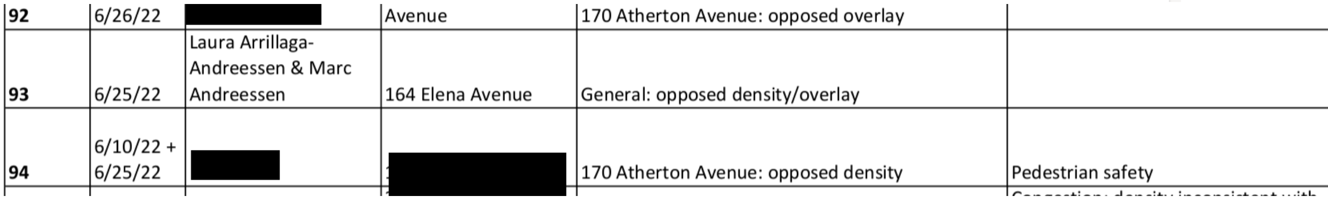
ATTACHMENT 3

#93

Dear Mayor DeGolia and Members of the Atherton Town Council,
I am writing this letter to communicate our IMMENSE objection to the creation of multifamily overlay zones in Atherton. Multifamily development is prohibited in the Atherton General Plan and any change in zoning and land use rules should only be considered after a thoughtful General Plan amendment process, that includes significant community outreach, participation and comment.
Please IMMEDIATELY REMOVE all multifamily overlay zoning projects from the Housing Element which will be submitted to the state in July. They will MASSIVELY decrease our home values, the quality of life of ourselves and our neighbors and IMMENSELY increase the noise pollution and traffic.

Thank you,
Laura Arrillaga-Andreessen and Marc Andreessen
164 Elena Avenue
4 Properties on Tuscaloosa

6/25/22



92	6/26/22	[redacted]	Avenue	170 Atherton Avenue: opposed overlay	
93	6/25/22	Laura Arrillaga-Andreessen & Marc Andreessen	164 Elena Avenue	General: opposed density/overlay	
94	6/10/22 + 6/25/22	[redacted]	[redacted]	170 Atherton Avenue: opposed density	Pedestrian safety

pp. 1, 113, 270

The document has for title '*SUMMARY OF PUBLIC COMMENTS RECEIVED ON THE DRAFT HOUSING ELEMENT 2023-31 UPDATE*' and is 279 pages long.

The URL is *https://www.ci.atherton.ca.us/DocumentCenter/View/10529/Public-Comments-and-Summary-Info* leading to a file `(3_) Att 3 - ALL .pdf`

On the whole the document - a compilation of complaints to denser building by inhabitants of Atherton, California - is a bottom pit of humanity :

Madame Ann, for example, who inherited significant wealth from her parents in the form of a large property in the town, wants to live to be 100 years old in a "high-end" (an expression she uses multiple times) environment. She finds multi-family units "cruel"... [p. 3]

Jerry, a "real estate developer and builder for 50 years" claims "Quite frankly I was shocked" to learn about the development plans, and questions its legality. [p. 10]

Jane and Marten oppose the plan as well, but are generous enough to propose a list of alternative sites where the riff raff could move in. [p. 18]

A collective complaint by "long-time Atherton home residents and homeowners" reads :

> "*the construction of multi-family units in the middle of Atherton among surrounding single family only homes will stick out like a sore thumb. The look and feel of the town is what attracted most residents in Atherton. The schools tend to be small and do not have infrastructure to support current needs. Adding 80 units and associated additional kids requiring school resources will create a burden.* (...) *these kinds of projects would create a nightmare of traffic, safety and strain on resources and the residents in these neighborhoods.*" [pp. 20 f.]

i.e., they don't want chocolate and poor kids in their neighborhood (but, not wanting to appear racist or elitists, they use highly euphemistic language of "safety" and "burden").

Mark and Yvonne, who have a second home in the area and describe themselves as "part-time resident", believe the project would be "an odd eyesore in what is a single family area". [p. 188]
etc. etc. !

This link now leads to a 404 error but is available at the Internet Archive : "Saved 13 times between August 5, 2022 and July 5, 2023."

Timeline of events is informative :

- July 14, 2022 : date of the document
- August 4, 2022 : *The Atlantic* publishes an article citing this document, called “The Billionaire’s Dilemma”, focusing on Marc Andreessen and Laura Arrilaga and the obvious contradictions between their public images — Andreessen advocated for dense building while Arrilaga has built her entire life, identity and career on philanthropy — and their opposition to multi-family units being built close to their home / in their town.
- August 5 to August 10 at least : the Internet Archive captures the document successfully on multiple occasions.
- August 12 : the document becomes unavailable (404)

Special 15

Camille Akmut

February 6, 2024

BOOKS

— G. H. Hardy and E. M. Wright. *An introduction to the theory of numbers.*

Hardy was one of the - arguably last - classical, broadly educated-interested mathematicians of the 20th c., (in the elite tradition of Cambridge as it was organized up to WW2[1]), whose influence or status has reached beyond the limits of mathematics. The field of number theory, in which Hardy specialized, has an impact on computer science as it is of relevance to at least cryptography.

Hardy's *Apology* is perhaps best known (in addition to association with Ramanujan). Less known : Hardy among others was also author of an introduction to number theory (of higher mathematical requirements than the apology, but somewhat accessible); H. and his co-author explained :

> "*The book is written for mathematicians, but it does not demand any great mathematical knowledge or technique. In the first eighteen chapters we assume nothing that is not commonly taught in schools, and any intelligent university student should find them comparatively easy reading. The last six are more difficult, and in them we presuppose a little more, but nothing beyond the content of the simpler university courses.*"

Editions of this text have appeared at regular interval since its original publication in 1938, with end of chapter and in-text notes updating Hardy's text to current knowledge, state of the field. Notable are the 4th ed., for being the edition used by Andrew Wiles[2], and the latest 6th ed. for being the most up to date[3], containing Wiles' foreword and a new chapter on elliptic curves - at O.U.P..

Hardy's continually updated text has resulted in a collaborative work that is of interest in and of itself, and whose nature is not too far from open source development[4]. A great advantage is the presentation and even motivation of mathematics as a historical enterprise - the EOC notes point out changes having intervened since Hardy/Wright; which we personally find agreeable.

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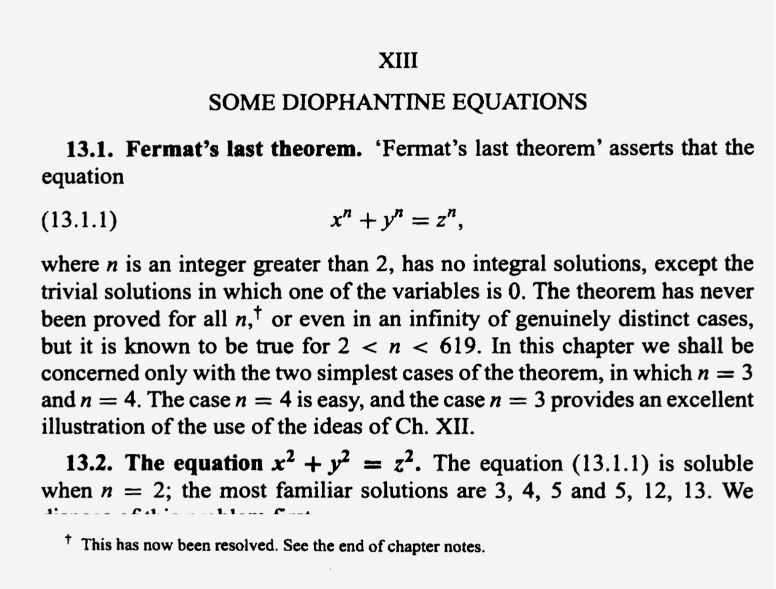
[1] in the Oxford/Cambridge men's only, pederast or homoerotic fashion described in several novels; a culture which ended with the second world war, the beginnings of mass education, and official admission of women (the narrator of Brideshead reminisces over this period as an officer engaged in WW2 if we remember correctly).

[2] "*I had the great good fortune to have a high school mathematics teacher who had studied number theory. At his suggestion I acquired a copy of the fourth edition of Hardy and Wright's marvellous book An Introduction to the Theory of Numbers. This, together with Davenport's The Higher Arithmetic, became my favourite introductory books in the subject. Scouring the pages of the text for clues about the Fermat problem (I was already obsessed) I learned for the first time about the real breadth of number theory.*" [ibid. 6th ed.]

[3] "*This sixth edition contains a considerable expansion of the end-of-chapter notes. There have been many exciting developments since these were last revised, which are now described in the notes. It is hoped that these will provide an avenue leading the interested reader towards current research areas.*"

[4] It is a misunderstanding that open source means projects must accept all contributions;

For example, in chapter XIII, on Diophantine equations, Hardy and Wright wrote about Fermat's theorem "The theorem has never been proved for all n" while the latest edition adds the in-text, dagger note "This has now been resolved. See the end of chapter notes." These in turn state "Fermat's Last Theorem was finally settled in a pair of papers by Wiles, and by Wiles and Taylor"...



XIII

SOME DIOPHANTINE EQUATIONS

13.1. Fermat's last theorem. 'Fermat's last theorem' asserts that the equation

$$x^n + y^n = z^n, \qquad (13.1.1)$$

where n is an integer greater than 2, has no integral solutions, except the trivial solutions in which one of the variables is 0. The theorem has never been proved for all n,[†] or even in an infinity of genuinely distinct cases, but it is known to be true for $2 < n < 619$. In this chapter we shall be concerned only with the two simplest cases of the theorem, in which $n = 3$ and $n = 4$. The case $n = 4$ is easy, and the case $n = 3$ provides an excellent illustration of the use of the ideas of Ch. XII.

13.2. The equation $x^2 + y^2 = z^2$. The equation (13.1.1) is soluble when $n = 2$; the most familiar solutions are 3, 4, 5 and 5, 12, 13. We

[†] This has now been resolved. See the end of chapter notes.

The new chapter 25's presence on elliptic curves is explained : "This subject, which was not mentioned in earlier editions, has come to be such a central topic in the theory of numbers that it was felt to deserve a full treatment. The material is naturally connected with the original chapter on Diophantine Equations." Cryptography applications are mentioned in EOC n. §25.6 :

> *The lack of an efficient algorithm to solve the ECDLP led Koblitz (Math. Comp. 48 (1977), 203-9) and V. Miller (Lecture Notes in Comput. Sci. (Springer), 218 (1986), 417-26) independently to suggest the use of elliptic curves for the construction of public key cryptographic protocols.*

[ECDLP = elliptic curve discrete logarithm problem.

The idea developed here we believe is roughly that because there are no fast solutions it would be good to use in cryptography as it would be hard to crack...]

---

similarly contributors to the book are limited. [Forks are the democratic or libertarian solution to this, and, to continue the analogy, anyone is free to start their own project based on previous work, just as everyone can write their own number theory book, in principle...]

A course of pure mathematics is another similar, generalist text by Hardy[5]. Outside of the aforementioned, Hardy wrote highly specialized material, that we are aware of.

The other such mathematician being Hardy's contemporary Russell, to whom H. has dedicated a monograph; the latter as a logician and early introducer of works by foreign mathematicians in the English language, combined with extraneous reasons (illustrious family and broad liberal, paternalist politics of the kind-and-enlightened-elites-will-guide-the-mass British sort).

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[5] "This book has been designed primarily for the use of first year students at the Universities" per preface.

Special 16

Camille Akmut

February 9, 2024

[NSA surveillance and resistance in the first decade of the 21st c.]

DOCUMENTARY— *United States of Secrets* (2014)

This documentary film deserves much wider recognition, in particular "Part One: The Program" directed by Michael Kirk, circa 2h.

A misunderstanding about this documentary is perhaps that it focuses on Snowden, but not so (it would be less interesting considering the by now star status of the latter, whose story has comparatively received much more attention and coverage, incl. one Hollywood film, and thus better understood) :

Instead, what makes the first part so outstanding is that it tells the — far less known — history of NSA spying in the early 2000s, in the preceding period from 2001 to 2009, during which a dormant and weakened NSA was re-activated and unleashed after 9/11, and the many opposition and leaks, including by agency personnel, that came before.

Indeed, this work makes clear that there was considerable resistance originating from multiple sides — from veteran and high ranking NSA employees through lawyers at the DoJ, congressional staff to journalists whose early attempts at reporting was halted by their superior editors — and this rich history is well captured here.

A misunderstood aspect of NSA history in the 21st c., during which it made full use of surveillance possibilities enabled by computer technology, is probably that before Snowden there was darkness and then the lights turned on. But, that is a simplistic view of history, maybe easier to accept.

It poses and raises the following question : Was it easier for Americans to accept a clean cut, all-American young white male with Libertarian proclivities who rebelled against the machine as their savior rather than people like Thomas Drake, a top NSA executive who leaked to the Baltimore Sun, or Diane Roark, a congress staff who early on tried to sound the alarm and was turned down at every turn and corner as if insane? Or even NSA's Edward Loomis - no radical by any means, a faithful servant of the State of 40 years - whose life was destroyed because he had communicated a deep concern with changes at the NSA which went against all of his experience?

And, the list goes on and on :

not least reporters of *The New York Times* Risen and Lichtblau who, despite having assembled enough evidence, were silenced by their own journal because its leaders stopped inquiring as soon as the Bush administration called them up to the White House and uttered the magic, totem-like phrase 'national security risk'; and, being the obedient dogs that they are, went to lye by the fireplace, at their master's feet..... (even though the White House's alarmed reaction could only be regarded as serving to confirm the story's credibility in the first place!). Privacy vs. security : when it came down to it, these hallowed members of the journalistic profession opted for the latter... The N.Y.T. truly is a rag and a disgrace.[1]

A really baffling moment is reached when General Hayden — the general overseer of surveillance for the NSA during that period — argued essentially that State spies like himself and journalists are one and the same, or at least have a right to keep secrets for the same reasons.

This document is not lacking in vile figures but even among them a few stand out, coincidentally all lawyers... :

– Vito Potenza, the NSA General Counsel, is a soul-less ghoul, barely human, in a way that only lawyers can be. His response at around 30 m., a mix of cold blooded complete and utter lack of sentiments combined with snobbery, represents some of the bottom and worst qualities in a human being.

Vito Potenza clearly is in the wrong film here and should consider - whether in fiction, or in reality... - employment with the mafia.

His shameful words for Thomas Drake, "Don't ask any more questions, Mr. Drake", are as open a death threat or threat of violence as can be formulated.

– Alberto Gonzales, former White House counsel promoted to A.G. for loyal and unquestioned service, is a boot-licking, spineless careerist.

When the NSA spying was almost halted because the then attorney general and even the FBI director (a position whose occupants are generally not known for radicalism, either) refused to cooperate any longer and threatened to resign, it was Gonzales who made the continued spying possible.

– Barack Obama, who had advocated for transparency and "change" during his campaign, and was himself a law scholar (described as a "civil libertarian"), once elected and fully informed about the domestic spying chose to keep the program. This occurred early on in the presidency, demonstrating how compromised he had been from the start. Even previously, as a senator, he had voted for the FISA Amendment Act of 2008. (His aids explain this away or downplay this decision by stating that as a young and inexperienced politician he wished to appear tough on security issues). In a private conversation he said he was "willing to kill" as a president if this is what it it took to do the job.

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[1] Episodes such as this one are why communists as part of proletarian revolutions have opted to shut down the Bourgeois press, whose main function is to be an organ for the elite in times of capitalism's rule, and to act as a destabilizing, counter-revolutionary force during any democratic attempts. (Following this rule, the N.Y.T. would be at the peak of its critical powers during a communist revolution — critical against the people...) Everything is upside down as Marx/Engels explained in The German Ideology, like looking at a camera obscura from the other side.

Hayden's analogy and equation between journalism and State surveillance happens around 1h05 : "*There is a reason we keep intelligence sources and methods secret. It's the same reason journalists try to keep their sources and methods secret.*"

FRONTLINE
MICHAEL HAYDEN
It's the same reason journalists try to
keep their sources and methods secret.
FRONTLINE
ROBERT DEITZ
NSA General Counsel, 1998-06
I spent a kind of sleepless night pondering the legality
VITO POTENZA
NSA Dep. General Counsel, 1993-06
Mr. Drake."
"Don't ask any more questions,
I satisfied myself that there was sufficient legal authority

Il. Up, defenders and enablers of NSA's spying : [3] Vito Potenza [4] Alberto Gonzales
Down, opposition : [col1] Drake and Gorman [col2] Tamm and Risen [col3] Binney and Roark

FRONTLINE
THOMAS DRAKE
NSA senior executive, 2001-08
I just thought it was important.
WILLIAM BINNEY
NSA technical director, 1965-01
the brainchild of veteran crypto-mathematician Bill Binney.
FRONTLINE
JAMES RISEN
The New York Times
I worked at the House Intelligence Committee for 17 years.

Thomas Tamm, a lawyer from the Department of Justice, whose family has deep ties with the FBI ("His uncle was one of the top aides to J. Edgar Hoover")[1], was another whistleblower who contacted the New York Times because he knew of a journalist who reported on the DoJ there (Lichtblau)[2]. Instead of going out to lunch he made a phone call.

> "*One day, on his lunch break, he slipped into a Washington subway station. He used a pay phone to make an anonymous call to the New York Times. He said he was sweating, nervous, looking around.*"

---

[1] another whistleblower with a background similar to Snowden's own (a family close to the military/State) - as such an unlikely source of leaks, but also immune to criticism such as lack of patriotism, let alone communist sympathies or affiliation...

[2] "I had read articles by Eric Lichtblau with the New York Times. I knew he was covering the Department of Justice." [1h02]

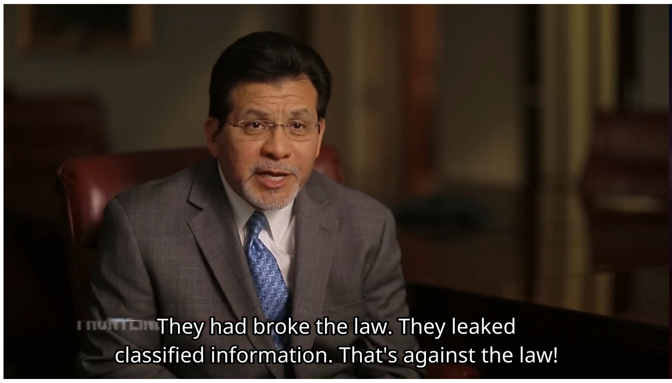
Alberto Gonzales, with his cheap taste in lawyer suits and climber-up, making-it-at-all-cost mentality (I made it momma, I made it!), couldn't be of greater contrast to dignified participants like Tamm or Drake and delivers one clownish remark after the other in his ponderous yet false tone whose seriousness is overdone, like everything else - In one passage, about his signature providing the legal basis for spying, he opines "*I satisfied myself that there was sufficient legal authority to move forward. (...) I felt comfortable that it was in fact lawful*" [c. 50m]

This passage is only topped by another at around 1h30m when he emphasizes about the manhunt for the whistleblowers undertaken as he became attorney general : "They had broke the law. They leaked classified information. *That's against the law!*" Gonzales' myopia is such that, in his view, breaking the right to privacy of hundreds of millions wasn't of more urgent concern and did not represent a far greater bad, but those who courageously spoke out against it were the real, hardened criminals - confusing the letter with the spirit of the law.

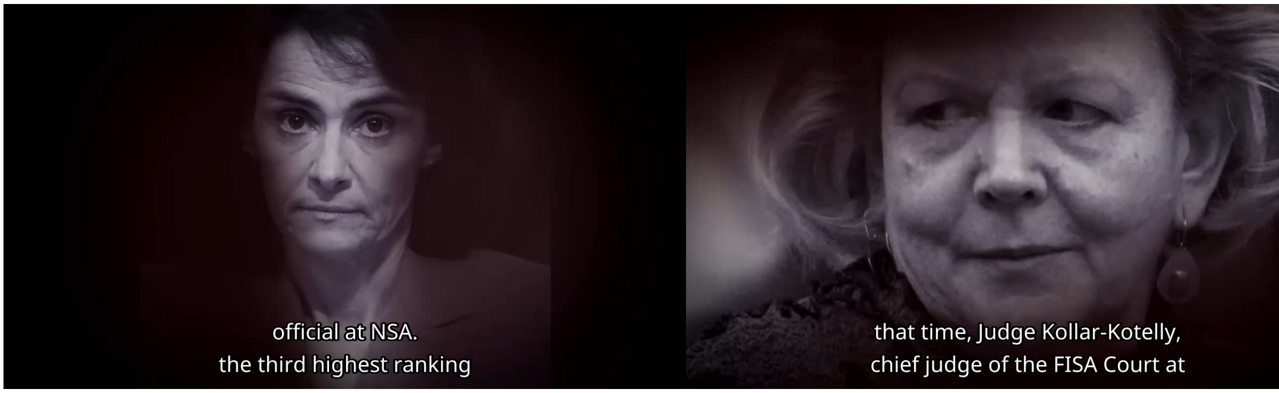
Though more adroit, and refined in his ways, (especially meticulous in avoiding an outright admission), Deitz is no less ridiculous who claims that his signature validating the program's legality was given only under great duress, "*this was a very hard call*" [22m] he insists, yet the next minute mentions "a kind of sleepless night" spent thinking it over; in his mind, this was to further stress how complicated the decision must have been. But, considering that a mass surveillance program was made possible by his actions, twenty nights of restless reflection wouldn't have been enough.

Follows a table of characters which will hopefully serve the purpose of enriching discussion of NSA's modern history and resistance to it beyond - and indeed before - Snowden :

	role (in-film legend)	note
The Program		abstract designation for surveillance incl. domestic by NSA after 9/11
David Addington		"drafted the first authorization" (Dick Cheney's lawyer)
John Ashcroft		Attorney General who ultimately withdrew his support for the program
Bill Binney	"NSA technical director, 1965-01"	creator of `ThinThread`, had implemented encryption later removed
James Comey		Deputy then acting Attorney General after Ashcroft's hospitalization
Robert Deitz	"NSA General Counsel, 1998-06"	signed off on the program
Thomas Drake	"NSA, senior executive 2001-08"	NSA whistleblower and leaker of documents
FISA Court		the Foreign Intelligence Surveillance Court, "one of the most secretive institutions in Washington"
Jack Goldsmith	"Office of Legal Counsel, 2003-04"	Head of the Office of Legal Counsel, later Harvard professor who became suspicious of the warantless wiretapping
Siobhan Gorman	"The Baltimore Sun, 2005-07"	journalist who received Drake's NSA leaks
Alberto Gonzales	"White House Counsel, 2001-05", "Attorney General, 2005-07"	renewed the program by replacing the unwilling A.G.'s signature
Michael Hayden	"NSA Director, 1999-05"	
Bill Keller	"Exec. Editor, The New York Times, 2003-11"	prevented publication on the program after meeting with Condo Rice, Gen. Hayden et al. in 2004
Eric Lichtblau	"The New York Times"	contacted by Tamm, silenced by the N.Y.T.
Edward Loomis	"NSA cryptologist, 1964-01"	dissenting veteran NSA employee (left in 2001)
Mueller		FBI Director, who threatened to resign alongside Comey
Vito Potenza	"NSA Dep. General Counsel, 1993-06"	signed off on the program, dismissed Drake's complaints
James Risen	"The New York Times"	silenced by the N.Y.T. until he threatened to publish a book chapter
Diane Roark	"Staff, House Intel. Cmte., 1985-02"	Binney's contact in Congress
Thomas Tamm	"Attorney, Dept. of Justice, 1998-06"	whistleblower to the New York Times / Lichtblau
`ThinThread`		name of the software used - adapted, without safeties - in The Program
J. Kirk Wiebe	"NSA senior analyst, 1975-01"	one of the dissenting veteran NSA employees (who left in 2001)


They had broke the law. They leaked
classified information. That's against the law!

(pictured above, r., the shadow lawyer : David Addington)


official at NSA.
the third highest ranking
that time, Judge Kollar-Kotelly,
chief judge of the FISA Court at

[1] Maureen Baginski of the NSA [2] Judge Kollar-Kotelly chief of FISA court

And, now comes the part where our analysis becomes more bitter and illiberal :

Above all else, this history - in itself troubling, as a group of politicians, lawyers and intelligence personnel conspired to create an illegal program of surveillance - shows just how much the traditional lines of politics (primarily of the reformist kind) are troubled :

1) It wasn't democrats or even "progressives" who saved the day.

- Goldsmith is a Federalist Society member, described as "well-known and liked in the conservative movement"; neither is the Harvard Law School a place of radicalism in America...

- Diane Roark is a veteran Congress staff who has remained in her position for almost 20 years (something that seldom happens without an ability for compromise). In the film her politics are described as : "*She's very conservative. She's a Republican.*"

- Tamm, as already stated, came from a deep Federal Bureau family background - father and uncle.

- None of the veteran dissenters from the NSA strike as rebels or hippies :

Loomis even started crying when recalling his rejection by an institution he had dedicated his entire life to; Per his own description "a devout patriot".

Kirk Wiebe holds the second highest award of the NSA.

Drake, before his de facto demotion (he was able to keep his job but with his entire staff and resources removed), ranked high in the NSA.

2) neither women nor "minorities" played any uniform, unambiguously attributable role. Many in fact were major proponents of the program :

Times over and over again it was women in top positions — one at the NSA, and one at the FISA court — who made the program possible; Gonzales went against dozen of his colleagues' opinions at the DOJ [55m] to once again sidestep and restore the program.

Maureen Baginski, the third highest NSA staff, proved to be a bureaucrat no better than her male counterparts, and worse than many of them : according to both the testimonies of Jane Mayer (The New Yorker) and Thomas Drake she is someone who adroitly avoids putting important decisions in writing, instead communicating in ways that leave no compromising trace, in particular her refusal to accept a less harmful version of Thintread.

> Wiebe described the old version of Thinthread as follows : "*It had a data privacy section (...) by encrypting the data and not allowing analysts to look at it even.*" [c. 25m]

Kollar-Kotelly, "the chief judge of the FISA Court", approved the program at a time when it had lost almost all legal sitting, her support saved the program in extremis.

> *Hayden personally me[t] with Judge Kotelly of the FISA Court on two Saturdays to make the pitch, to explain how they are going to do this. And Kotelly eventually rules that this is legal: that the NSA can indeed collect all of the Internet metadata going to and from the United States.*

But Obama, who kept the program intact, of all is maybe the best representation of this phenomenon : a cafe au lait politician, whose coffee and cream tone, reflect cafe au lait political positions... To the public he lied about reform, and as soon as in power assured the continued status quo.

Going even further on this illiberal path, Condoleezza Rice's case of course represents a great dilemma for the liberal mind for here is a woman who combines all minority qualities - female and black - promised to be the future of humanity and politics; yet at virtually all times, Rice stood on the wrong side of history, consistently aligning herself with dominant powers. (In the film she can be seen in several photos next to David Addington we believe, recognizable by trademark perm and earrings.)

Fundamentally, the idea that women are kinder or more progressive by nature is in itself an anti-feminist idea, just as that blacks possessing certain innate positive, and more often associated negative, traits is a racist one.

For all her faults, Rice proved one point, namely that women are *in fact* equal to men : her case, though not the first, specifically proved that they could be just as thuggish, ruthless, criminal including in the political arena.

Baldwin warned of the black policeman, who used his knowledge of black communities against them. But, fast forward a half century of liberal politics, and it is the black politician that must be feared!

In the end, there is no liberation whatsoever to be found in identity politics - both on an ideological and practical level, they are a dead-end. There is only liberation in class war and class politics, and rainbow coalitions of the Black Panther, Chicago type. Brothers and sisters with an unshakable faith.

Special 16-2

Camille Akmut

February 12, 2024

DOCUMENTARY — *United States of Secrets.* Part two: Privacy Lost

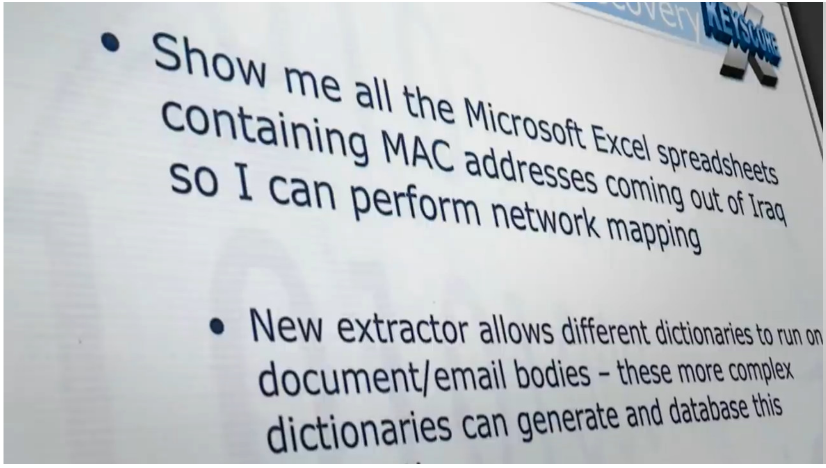
	role (in-film legend)	note
James Bamford	“Author, The Shadow Factory”	author of a popular intelligence book. As a consultant for Drake’s defense found that “classified” documents he was accused of retaining - a crime - had been unclassified by the government itself
Richard Clarke	“NSA Review Group, 2013”	Obama’s directions for the group, per Clarke : full access, free recommendation but “what I won’t accept is any block between me and my constitutional oath of defending the United States.”
Barton Gellman	“The Washington Post / FRONTLINE”	described as “the only other reporter to receive documents directly from Snowden”; a “national security investigative reporter” who felt the trip to Hong Kong was too risky
Glenn Greenwald	“The Guardian, 2012-13”	Author of the ‘Glenn Greenwald on security and liberty’ series in the Guardian. At first ignored Snowden, but joined Poitras on the trip to Hong Kong. Among others, reported the Verizon story as an ”exclusive” for the Guardian.
Mark Klein	“AT&T technician, 1981-04”	Discovered 641A, later went public
Ewen Macaskill	“The Guardian”	“a veteran Guardian reporter”. Part of the Hong Kong trip, used the coded phrase ‘*The Guinness is good*’ to confirm Snowden’s authenticity to the journal
Nick Merrill	“CEO, Calyx”	ISP that challenged the NSLs’ legality and won (with the ACLU)
Edward Snowden		a “low-level analyst” per Greenwald. “worked for Booz Allen Hamilton as an infrastructure analyst for NSA in Hawaii” (Guardian self-presentation video). Used the alias VERAX [lat. truth teller]
Ashkan Soltani	“The Washington Post”	“internet security expert”, co-authored the article for the W.P. “NSA taps Yahoo, Google links”
Arlen Specter	“(D) PA, 1981-11”	Democratic Senator who asked AT&T’s chief about data sharing with “any law enforcement agency” yet received no direct answer
Steven Tyrrell		federal prosecutor who threatened Drake with 35 years in prison
Edward Whitacre Jr.	“AT&T Chairman & CEO, 2005-07”	Telecom boss who steadily responded “I follow the law” when questioned by Sen. Specter (on customer information and agencies)
NSL		National Security Letter. A Patriot Act tool that empowered the FBI to directly request information without much legal barriers. e.g., sent to ISPs (no major company opposed it until 2013)
Microsoft		First company to participate in PRISM, as early as 2007. In 2013 denied involvement
Google		3rd earliest company to participate in PRISM, in January 2009. In 2013 denied involvement
Facebook		4th earliest company to participate in PRISM, in March 2009. In 2013 denied involvement, Zuckerberg denied knowledge
NSA Review Group		group put together by Obama for the purpose of a “review of our surveillance programs”, he further stated in the press conference “I am tasking this independent group (...) they will provide an interim report in 60 days and a final report by the end of this year”. ‘Liberty and security in a changing world’ released in Dec. 2013
New York Times		journal specifically excluded by Snowden
The Guardian		front-page “US orders phone firm to hand over data on millions” by Greenwald covered the Verizon-NSA angle
Washington Post		June 7th 2013 front-page article “U.S. mines Internet firms’ data” by Gellman and Poitras contained the PRISM documents (in large reproductions e.g. A12)
PRISM		arguably the best known and most iconic of the NSA programs, detailed the collusion between Big Tech companies and the NSA.
Muscular		another code name NSA program, consisting in “secretly extracting data from fiber optic cables overseas”
641A		AT&T secret room with no door knobs, connecting to the 7th floor Internet traffic

This documentary was released in 2014, i.e. right after the 2013 NSA leak reporting. Its second part is divided between Snowden[1], and private companies and their relationships with the various agencies. Circa 1h.

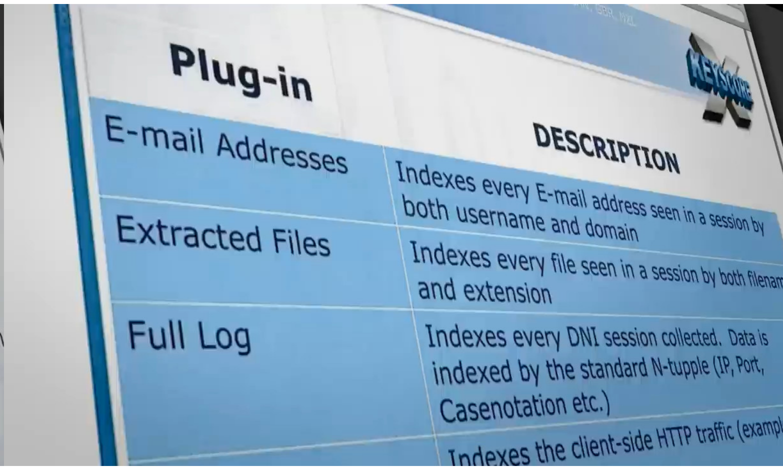
Among other interesting details about the former is that Snowden had specifically studied the cases of the whistleblowers before him. With respect to Drake, S. understood he needed proof and for it to be made public, e.g. to avoid attacks based on his person or reputation. From Tamm's case, he chose to avoid The New York Times, a publication he disliked.

In December 2012 Snowden first contacted Glenn Greenwald, which he attempted multiple times, but he ignored and dismissed it because most messages of this type are - in his words - by ”crazy” people... Snowden, who used the nickname VERAX, then contacted Laura Poitras using her encryption key, who in turn met with Barton Gellman, a journalist who specialized in national security, in New York. “Poitras wanted to go, Barton Gellman worried about a secret meeting in a foreign country like China decided not to”. Gellman, based on the material later published articles on subjects like PRISM for the Washington Post. Poitras then recruited Greenwald. Macaskill joined. Poitras doesn't get enough credit : It's not clear if in between Greenwald's snobbery and Gellman's fears - however justified - the leaks would have happened. Another nice detail, is that files sent by Snowden were on a thumb drive of Poitras, who gave them to G. once they were “airborne”, and documents were reviewed on the flight to HK.

Il. examples of documents shown in the documentary

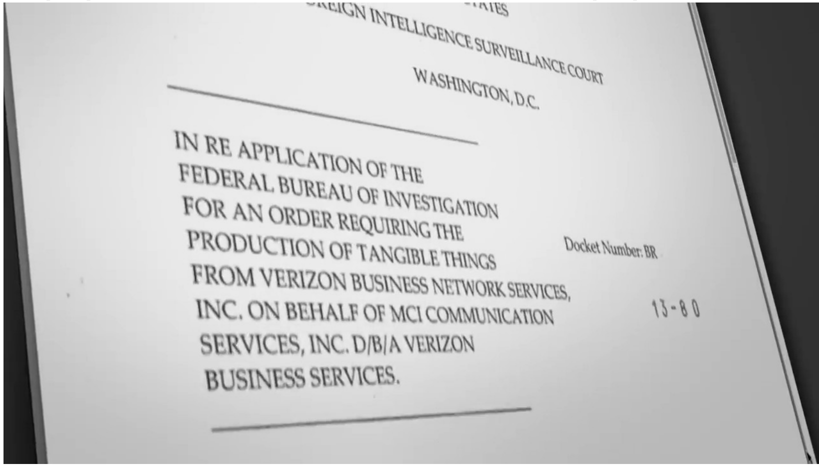


- Show me all the Microsoft Excel spreadsheets containing MAC addresses coming out of Iraq so I can perform network mapping
  - New extractor allows different dictionaries to run on document/email bodies – these more complex dictionaries can generate and database this



Plug-in	DESCRIPTION
E-mail Addresses	Indexes every E-mail address seen in a session by both username and domain
Extracted Files	Indexes every file seen in a session by both filenam and extension
Full Log	Indexes every DNI session collected. Data is indexed by the standard N-tupple (IP, Port, Casenotation etc.)
	Indexes the client-side HTTP traffic (examp

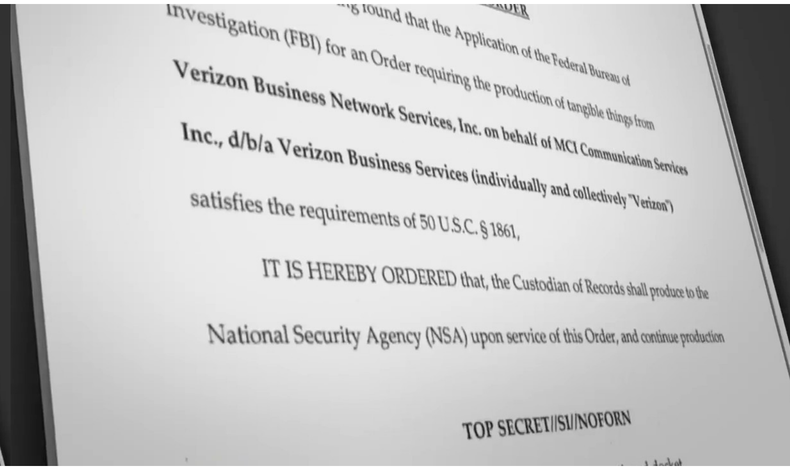
[1-2] presentations with header XKEYSCORE [3-4] the Verizon documents



OREIGN INTELLIGENCE SURVEILLANCE COURT
WASHINGTON, D.C.

IN RE APPLICATION OF THE
FEDERAL BUREAU OF INVESTIGATION
FOR AN ORDER REQUIRING THE
PRODUCTION OF TANGIBLE THINGS
FROM VERIZON BUSINESS NETWORK SERVICES,
INC. ON BEHALF OF MCI COMMUNICATION
SERVICES, INC. D/B/A VERIZON
BUSINESS SERVICES.

Docket Number: BR
13-80



g found that the Application of the Federal Bureau of Investigation (FBI) for an Order requiring the production of tangible things from **Verizon Business Network Services, Inc. on behalf of MCI Communication Services Inc., d/b/a Verizon Business Services (individually and collectively "Verizon")** satisfies the requirements of 50 U.S.C. § 1861,

IT IS HEREBY ORDERED that, the Custodian of Records shall produce to the National Security Agency (NSA) upon service of this Order, and continue production

TOP SECRET//SI//NOFORN

The second part of the documentary also covers the so-called National Security Letters (NSL). Their background is explained : “After 9/11, the Patriot Act allowed any FBI office in the country to issue NSLs without a court's review and with a gag order.” (from about 30m) Through these letters data could be demanded from ISPs for example.

Damning information provided in the film, if correct, is that “Until 2013, no major internet or phone company is known to have questioned the constitutionality of a National Security Letter.” and further : “[in 2004] the FBI issued 56,000 National Security Letters, but Merrill was the first person who had challenged a letter on constitutional grounds."

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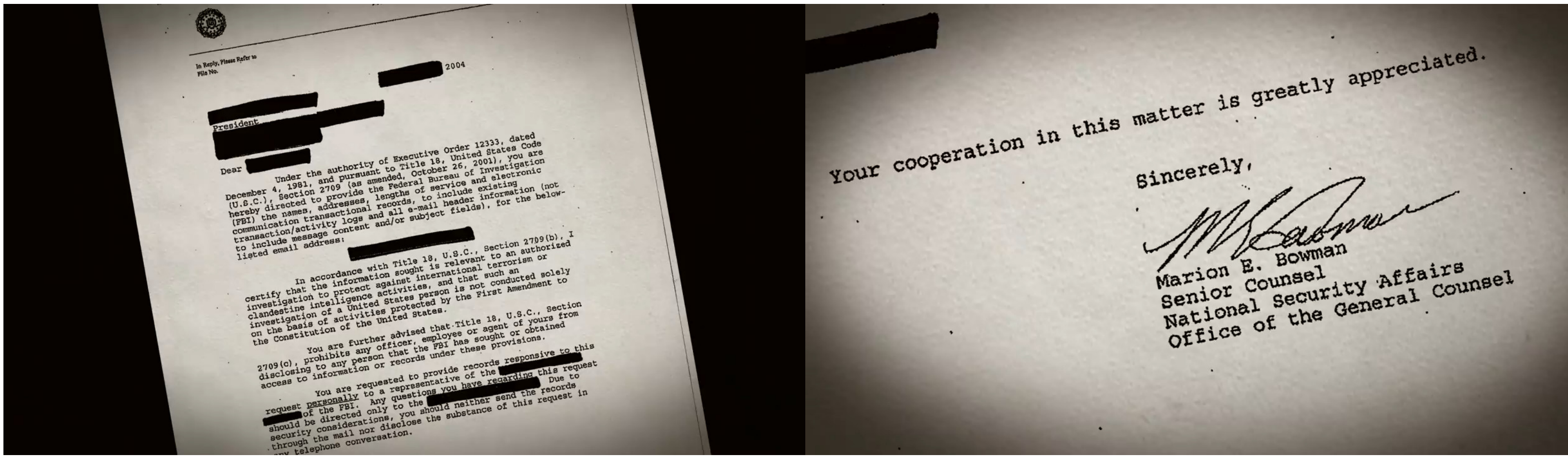
[1] For those especially interested in Snowden the first 10 minutes and last 5 minutes approximately of Part one are directly thematically linked.

It took "a small web hosting company in New York named Calyx" to fight the practice : "an Appeals court ruled it unconstitutional". Its CEO, Nick Merrill, states "It was clear to me that this was an official and genuine document, but I thought that it was not legal and not constitutional. And so I decided to disobey the commandment that I couldn't tell anyone", who then contacted the ACLU.



In Reply, Please Refer to
File No.

[redacted] 2004

[redacted]
President
[redacted]

Dear [redacted]

Under the authority of Executive Order 12333, dated December 4, 1981, and pursuant to Title 18, United States Code (U.S.C.), Section 2709 (as amended, October 26, 2001), you are hereby directed to provide the Federal Bureau of Investigation (FBI) the names, addresses, lengths of service and electronic communication transactional records, to include existing transaction/activity logs and all e-mail header information (not to include message content and/or subject fields), for the below-listed email address:

[redacted]

In accordance with Title 18, U.S.C., Section 2709(b), I certify that the information sought is relevant to an authorized investigation to protect against international terrorism or clandestine intelligence activities, and that such an investigation of a United States person is not conducted solely on the basis of activities protected by the First Amendment to the Constitution of the United States.

You are further advised that Title 18, U.S.C., Section 2709(c), prohibits any officer, employee or agent of yours from disclosing to any person that the FBI has sought or obtained access to information or records under these provisions.

You are requested to provide records responsive to this request personally to a representative of the [redacted] [redacted] of the FBI. Any questions you have regarding this request should be directed only to the [redacted] Due to security considerations, you should neither send the records through the mail nor disclose the substance of this request in any telephone conversation.

[redacted]

Your cooperation in this matter is greatly appreciated.

Sincerely,

Marion E. Bowman
Senior Counsel
National Security Affairs
Office of the General Counsel

A reproduction of a National Security Letter appears in the documentary, (likely the one sent to Merrill[2]), which we have transcribed :

```
U.S. Department of Justice
Federal Bureau of Investigation

(...)

Under the authority of Executive Order 12333, dated December 4, 1981, and pursuant to Title 18, United States Code
(U.S.C.), Section 2709 (as amended, October 26, 2001), you are hereby directed to provide the Federal Bureau of
Investigation (FBI) the names, addresses, lengths of service and electronic transactional records, to include
existing transaction/activity logs and all e-mail header information (not to include message content and/or subject
fields) for the below-listed email address:

    [redacted]

In accordance with Title 18, U.S.C., Section 2709(b), I certify that the information sought is relevant to an
authorized investigation to protected against international terrorism or clandestine intelligence activities, and
that such an investigation of a United States person is not conducted solely on the basis of activities protected
by the First Amendment to the Constitution of the United States.

You are further advised that Title 18, U.S.C., Section 2709(c), prohibits any officer, employee or agent of yours
from disclosing to any person that the FBI has sought or obtained access to information or records under these
provisions.

You are requested to provide records responsive to this request _personally_ [underlined] to a representative of
the [redacted] of the FBI. Any questions you have regarding this request should be directed only to the [redacted]
Due to security considerations, you should neither send the records through the mail nor disclose the substance
of this request in any telephone conversation.

[redacted]

Your cooperation in this matter is greatly appreciated.
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[2] the date of 2004 coincides with his interview : "In 2004, I got a phone call from the FBI. And they said that they had a letter for me. And within an hour or two, an agent had come to hand-deliver a letter to me."

This particular letter is dated 2004, signed "Marion E. Bowman, Senior Counsel, National Security Affairs, Office of the General Counsel".

Merrill noticed the following about the letter : "It was not a warrant. It was not stamped or signed by a court or a judge. It was this letter demanding this information from me"... And even more so : "what gave me confidence was the fact that we offered to give them the information if they would simply get a real warrant and the fact that they refused to get one."

One could argue that there is little difference between letters by government agencies like this one and the phishing attempts of so-called "hackers" (pursued by the same government). In both cases the principle is the same : sending them in bulk to see who bites. Lines are unclear and waters muddied in this regard also. The difference is that the State holds great power of intimidation, especially agencies like the FBI. Individuals will be too afraid to commit a faux pas and most don't have enough law knowledge, small companies unlikely to have the funds for litigation and/or concerned with continued profit making, big companies' legal departments handle requests routinely. A plausible explanation provided in the film is that large companies have "regulatory business" with the government, which they don't want to spoil (by being difficult in other areas)[3].

Note : in the NSLs, the legal justification sought in an amendment dated "Oct. 26 2001" must be a reference to the Patriot Act.

When AT&T's Chairman and CEO Edward Whitacre Jr. was questioned by Sen. Arlen Specter [D] and asked repeatedly the question "Does AT&T provide customer information to any law enforcement agency?" he consistently refused to give a direct or explicit answer, merely stating "We follow the law."

The lack of answer itself could be interpreted as an answer, suggesting some gag order was in place. If so the same Title 18 of the U.S. Code (2709c), as used in the National security letters, could have been used. Maybe Whitacre Jr. did get such a letter[4].

Even when asked outright by the senator "If you're under instructions by the federal government as a matter of state secrecy not to talk, say so." he did not deviate, only answering variations of the same.

If you're under instructions by the federal government
as a matter of state secrecy not to talk, say so.
Senator, we follow the law.

Seeing the powerlessness of one of the most powerful figures in politics before a businessman, likely protected by his cooperation with intelligence agencies, is a terrifying spectacle and a damning event for a so-called democracy. (around 28m)

This was a fairly early instance of a big technology company being questioned and Whitacre's attitude announced later, similar events in the 2010s.

Whitacre Jr.'s look to Specter — a complex mix of weariness, cynicism, battle tested experience and so forth — said it all : Senator, do you not know about happenings in your own country, in your own government?

While PRISM documents - i.e. detailing Big Tech's cooperation with NSA - are arguably the best known and iconic of the NSA documents brought to public attention by Snowden's leaks, (easy to understand with their bubbles and bright colors), from 18m. the documentary highlights another NSA program called Muscular, regarding NSA "secretly extracting data from fiber optic cables overseas".

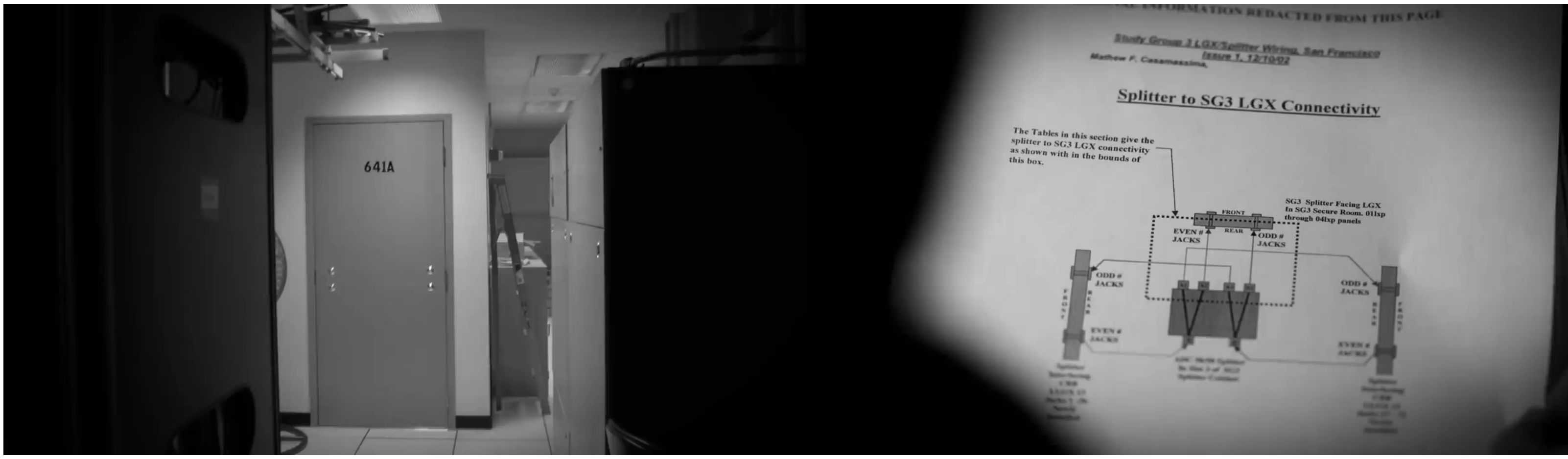
---

[3] "*... the big companies that are receiving these letters have regulatory business before the U.S. government and they don't want to annoy the authorities.*"

[4] (the timeline would fit : the letters became possible after 2001, Klein went public on seeing the 2005 NYT article, and Whitacre head of the company from 2005 to 2007)

Events wherein a long time AT&T technician of 20 years, Mark Klein, discovered the secret room — 641A — where a splitter had been installed is also included, from 23m. A strange feature of the room is that its door has no knobs. All cables coming out of the room seem to go to the 7th floor, where Internet traffic is handled.

Klein explains the function of a splitter : "The splitter is basically a glass prism. So you put a cable in there. The light beam goes in there and it's split like that [mimics horns with fingers]. One half is going to the secret room and the other half is going to its normal, assigned destination. But it's been copied in the process." (Fiber optic cables are shown during this.) Chris Hoofnagle, director of the UC Berkeley Center for Law & Technology, comments : "What Mark Klein found was an infrastructure that suggested that the government was copying all traffic going through the AT&T Internet backbone."



INFORMATION REDACTED FROM THIS PAGE

Study Group 3 LGX/Splitter Wiring, San Francisco
Issue 1, 12/10/02
Mathew F. Casamassina,

Splitter to SG3 LGX Connectivity

The Tables in this section give the splitter to SG3 LGX connectivity as shown with in the bounds of this box.

SG3 Splitter Facing LGX In SG3 Secure Room. 01lxp through 04lxp panels

The NSA Review Group, set up under Obama in the wake of the 2013 NSA controversies, is one more topic of part two. It is described by an insider, Richard Clarke, a member of the group :

> *The president's directions were, "Go wherever you want. You can see any classified program. No one can deny you any information. You can go anywhere in the intelligence community. You can recommend anything. Except, realize that what I won't accept is any block between me and my constitutional oath of defending the United States."* [16m]

Finally, Drake's process was a nightmare of Kafkaesque proportion : "classified" documents he was accused of unlawfully having retained - a severe crime, were found to be all unclassified and by the government itself. But the documents were retroactively reclassified after being taken from him!... (In the process he was ruined and became a part-time worker at an Apple Store.)

James Bamford, author of a popular book in the NSA literature and world, was hired as a consultant and established :

> "*basically all of the information that they were charging him with was already in the public domain. Not only that, it had been placed in the public domain by the government itself.*"

Drake's attorney Jesselyn Radack comments "*It was not stamped "Classified" until after it was seized from Tom Drake's home.*" Bill Binney adds :

> "*I looked at the stuff that he was indicted for. That material was clearly marked unclassified.* [cut] *And all they did was draw a line through it and classified that material, and so then they charged him with having classified material. It's like framing him, and we're going to frame you after the fact.*" (part 1, 1h45m)

Count One of the indictment was for "Retention of Classified Information" per 18 USC par. 793(e)

Snowden worked for Booz Allen Hamilton. For those not aware of the company : Booz Allen Hamilton was/is a sort of Palentir before Palentir, i.e. a shadowy Defense contractor with a reputation for technological edge. For graduates of top computer science programs in the US, Booz Allen Hamilton is a second or third tier career choice after Google, Facebook et al.

Greenwald's description of Snowden as "this low-level analyst" we understand emphasizes how incredible the leak was and how incredibly dumb or disorganized the NSA is, as the supposedly most powerful nation's intelligence.

An additional detail we noticed while going through these documents again is that, per PRISM presentations, Microsoft's participation is listed as having started on the symbolic date of September 11 2007 ("9/11/07")...

In the June 2013 ‘US orders phone firm to hand over data on millions’ Greenwald called the Foreign Intelligence Surveillance Court a “top secret court” (and used the abbreviation “Fisc”).

Descriptions of it given by Thomas Tamm — the Department of Justice attorney who ended up becoming a whistleblower — in part one are worth quoting :
“*It was on the sixth floor and only one elevator went up there. And it was literally in a bank vault because they were worried about the Soviet Union overhearing what was going on.*”

Follows our transcription of the Verizon-NSA order given by this court below :

FOREIGN INTELLIGENCE SURVEILLANCE COURT
WASHINGTON D.C.

In Re Application of the
Federal Bureau of Investigation
for an order requiring the
production of tangible things
from Verizon Business (...)

SECONDARY ORDER

This court having found that the Application of the Federal Bureau of Investigation (FBI) for an Order requiring the production of tangible things from Verizon (...) satisfies the requirement of 50 U.S.C. paragraph 1861,

IT IS HEREBY ORDERED that, the Custodian of Records shall produce to the National Security Agency (NSA) upon service of this Order, and continue production on an ongoing daily basis thereafter (...) an electronic copy of the following tangible things: all call detail records or "telephony metadata" created Verizon for communications (i) between the United States and abroad; or (ii) wholly within the United States, including local

[note : ’ongoing daily’ part can be found in the Guardian article]

During the 2013 revelations one of the major effects was that the Silicon Valley, Internet companies which had built their entire identities and reputation around being cool, different (Apple’s motto), not evil (Google’s) and Libertarian or liberal in outlook — and in any case different from the State! — were shown to be collaborators with its worst agencies.

References :

(in approximate order of appearance)

Part 1

– "Nixon Resigns. He urges a time of 'healing'; Ford will take office today"	*The New York Times*	
– "NSA Intercepted Calls Of Dissidents in U.S."	*The Daily Times*	[1970s?]
– *Requirements for the TRAILBLAZER And THINTHREAD Systems* (U//FOUO)	Department of Defense	
– "Electronic surveillance within the United States for foreign intelligence purposes"	[title of a law, maybe USC?]	
– Memorandum ... Re: Military Interrogation of Alien Unlawful Combatants ...	U.S. Department of Justice, Office of Legal Counsel	March 14, 2003
– ST-09-0002 WORKING DRAFT (U//FOUO) *Internet Communications*		
– "Bid to Ease Spying Curbs In Terrorism"	James Risen, *NYT*	July 31
– "Cutbacks likely ahead for NSA. Negroponte aims to achieve 'a new balance' among intelligence agencies"	Siobhan Gorman, *The Baltimore Sun*	
– "System Error" (A Sun special report)	Siobhan Gorman, *The Baltimore Sun*	
– "Spying program snared U.S. calls. Some Exchanges Are Said to Be Purely Domestic."	James Risen and Eric Lichtblau, *NYT*	
– Public Law 110-261 – July 10, 2008 (Title I - Foreign Intelligence Surveillance)		
– "Bush Lets U.S. Spy on Callers Without Courts. Secret Order to Widen Domestic Monitoring."	James Risen and Eric Lichtblau, *NYT*	Dec. 16, 2005

Part 2

– *The Attorney General's Guidelines For FBI National Security Investigations and Foreign Intelligence Collection (0)*	"Classified by: John Ashcroft, Attorney General"	2003
– "In Re Application of the Federal Bureau of Investigation for an order requiring the production of tangible things from Verizon Business ..."	Foreign Intelligence Surveillance Court	
– "NSA collecting phone records of millions of Verizon customers daily"	Glenn Greenwald, *The Guardian* (web)	5 June 2013
– "US orders phone firm to hand over data on millions. Exclusive : top secret court ruling demands 'ongoing, daily' data from Verizon"	Glenn Greenwald, *The Guardian* (print)	
– "U.S. mines Internet firms' data, documents show"	Barton Gellman and Laura Poitras, *The Washington Post*	June 7, 2013
– "NSA whistleblower Edward Snowden: 'I don't want to live in a society that does these sort of things' - video"	*The Guardian* (web)	
– "NSA leaker comes forward, warns of agency's 'existential threat'"	Matt Smith, CNN (web)	June 9, 2013
– "The Criminal N.S.A."	Granick / Sprigman	June 27, 2013
– "Rand Paul: Big Brother Really Is Watching Us"	Rand Paul	June 10, 2013
– "Editorial: Snowden makes a point"	*The Washington Post* (web)	February 10
– "End the N.S.A. Dragnet, Now"	Wyden et al., *The New York Times*	Nov. 25, 2013
– "Facebook CEO denies knowledge of NSA's PRISM program. Mark Zuckerberg says press reports alleging that the social network gave the government access to its servers are "outrageous.""	Jennifer Van Grove, CNET	June 7, 2013
– "Apple, Google, Microsoft, And Facebook Deny Involvement In Massive Government Spying Program"	Jay Yarow	Jun. 6, 2013
– "NSA taps Yahoo, Google links"	Barton Gellman and Ashkan Soltani, *The Washington Post*	Oct. 31, 2013
– Splitter to SG3 LGX Connectivity	[technical doc.]	

Timeline

after WW2		NSA created to prevent another surprise attack like Pearl Harbor*
1970s		domestic spying under the Nixon administration, NSA restrained
2001	Sep. 11	9/11, NSA unleashed
2001	Oct. 26	Signing of the *Patriot Act*. In the press conference, Bush stated : “This new law that I sign today will allow surveillance of all communications used by terrorists, including emails, the Internet and cell phones. As of today we’ll be able to better meet the technological challenges posed by this proliferation of communications technology.”
2001	end Oct.	NSA veterans Binney, Loomis, Wiebe “all quietly retired”
2002	Summer	AT&T technician Mark Klein receives the visit of an NSA agent; Later discovers room 641A
2003	early	Department of Justice’s attorney Thomas Tamm starts a new job : “I work with agents, FBI agents primarily, to try and develop intelligence about people that we thought were foreign agents or terrorists.” and with the FISA court
2003	Fall	Cheney and Addington look for a new head of the Office of Legal Counsel : Jack Goldsmith
2004		Google launches Gmail “with vastly more storage than Microsoft’s Hotmail and Yahoo mail”
2004		the FBI sends 56,000 National security letters that year. Among them is Nick Merrill, CEO of a small ISP called Calyx, who fights back with the help of the ACLU.
2004	Mar. 11	Madrid : “one of the worst terrorist attacks since [9/11]”, “more than 190 people killed”, “at least 10 simultaneous bombs” Hayden and Gonzales use this event to justify their renewal of the program (despite withdrawal of the attorney general’s support)
2004	Mar. 11	the 11 March 2004 authorization of The Program, signed by the White House counsel, Alberto Gonzales, instead of the A.G. (who refused)
2004	Apr. 20	in a campaign event, Bush assures “Nothing has changed, by the way. When we’re talking about chasing down terrorists we’re talking about getting a court order before we do so.”
2004	Fall	“closed-door meeting” between Bill Keller, executive editor of the New York Times, and Hayden, Rice, Gonzales... Keller decides to abort reporting on the program.
2005		James Risen plans to release a book with a book chapter called ‘The Program’, leading the NYT to reconsider publishing.
2005	Dec.	NYT leaders summoned again, but this time decide to publish. Appearing on the front page : “Bush Lets U.S. Spy on Callers Without Courts. Secret Order to Widen Domestic Monitoring.” by Risen and Lichtblau. This prominent article about NSA spying encourages Klein to go public
2007	Summer	FBI raids on the homes of the primary suspects in the NSA leaks : Binney, Wiebe, Roark followed by Loomis
2007	Sep. 11	Microsoft starts participating in PRISM
2007	Nov.	Thomas Drake raided
2008		The FISA Amendment Act of 2008. Among those voting for it, Obama.
2008		During his campaign or as president, Barack Obama claimed : “No more secrecy! : That’s a commitment I make to you as president”, “It’s time for us to change America”, “No more illegal wiretapping”, “No more ignoring the law when it is inconvenient. That is not who we are!”
2008	March 12	Yahoo starts participating in PRISM. Among others, it is the provider of a popular mail service (Yahoo Mail)
2008	April	Drake is summoned by federal prosecutor Steven Tyrrell, faces 35 years in prison.
2009		Snowden is working as an NSA contractor (in Japan)
2009	Jan. 14	Google starts participating in PRISM
2009	March 6	Facebook starts participating in PRISM
2010	April	Thomas Drake charged
2012	Oct.	Apple starts participating in PRISM. According to Macaskill’s testimony about the Hong Kong trip, when he took an Apple phone out Snowden was appalled and asked to get rid of it
2012	Dec.	Snowden contacts Greenwald, who ignores it
2013	May	Snowden is in Hong Kong, having left Hawaii, invites Poitras and Gellman - Gellman declines
2013	June	Wave of NSA leaks articles : Verizon (Guardian), PRISM (WP)...
2013	June	Apple, Facebook, Google, Microsoft deny involvement - per press reporting of the time
2013	Dec. 11	leaders of big tech companies called to the White House to fix healthcare.gov; instead the meeting turns into complaints about the NSA and their public association with it
2013	Dec. 12	*Liberty and security in a changing world* report released by the NSA Review Group

*[13m]

Special 16-3

Camille Akmut

February 13, 2024

(modern history of NSA surveillance, part 3.)

Narration of the documentary says the healthcare.gov meeting took place on December 17th, and then places the release of the NSA review group's report "the next day" while the document shown is dated December 12.

Soltani, often in association with Gellman, published multiple articles in the Washington Post throughout 2013 and 2014 on the NSA and the leaks. For example, Google was angry at the cookie story, but not because it was wrong, a representative said it was "very technically accurate". The author explained :

> "The slide indicated the use of a specific Google cookie – it's called the PREF cookie – that's set by Google. Even if you've never been on google.com, in fact, when you turned on your computer and opened the browser, you were likely to get one of these cookies."

Another, 'NSA records calls of an entire nation' covered an NSA program called MYSTIC :

> "*The National Security Agency has built a surveillance system capable of recording "100 percent" of a foreign country's telephone calls*"

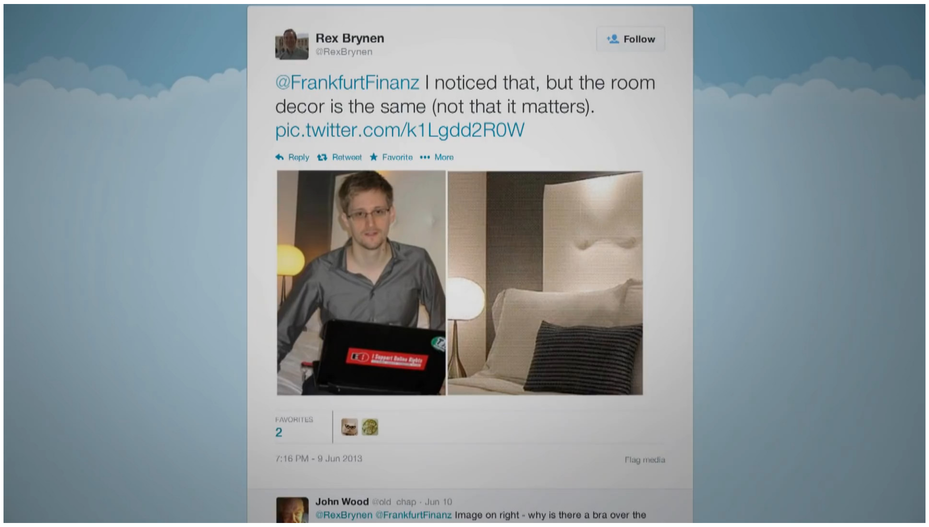
Gellman ended up meeting Snowden for a two-day interview in Moscow in December 2013.

In a circular moment of great metaphorical value for the new era, decor in a photo of Snowden posted on social media was identified by a Twitter user as belonging to The Mira, the hotel were he was hiding in Hong Kong. (The message is dated June 9 2013, hence the identification happened very quickly after the first wave of reporting.)

Later reporting based on the leaks, from March 2014, focused on quantum computers "that could break nearly every kind of encryption" ("crack most online codes" per the title), being built at the NSA.

References Part 2, second half :

– "6 in 10 Americans lack faith in Obama" [front page]	*The Washington Post*	
– "NSA using Internet 'cookies' to find targets. Snowden-supplied files say Google software is especially useful"	... Soltani, *The Washington Post*	December 11 2013
– Liberty and Security in a Changing World. Report and Recommendations of The President's Review Group on Intelligence and Communications Technologies		12 December 2013
– "Angry Birds and 'leaky' phone apps targeted by NSA and GCHQ for user data"	James Ball, *The Guardian*	28 January 2014
– "Revealed: GHCQ intercepted webcam images from millions of Yahoo users. Internet giant condemns 'violation of privacy that is completely unacceptable' by UK agency"	Spencer Ackerman and James Ball, *The Guardian*	28.02.2014
– "Revealed: NSA gathers 200m texts a day. GHCQ uses data 'goldmine' to search communications of people in the UK"	[The Guardian?]	
– "NSA records calls of an entire nation"	Barton Gellman and Ashkan Soltani, *WP*	March 19 2014
– "NSA aims to crack most online codes. PROGRESS TOWARD 'QUANTUM COMPUTER'. Snowden files show U.S. in race with Europeans"	Steven Rich and Barton Gellman, *WP*	January 3 2014


Rex Brynen
@RexBrynen

@FrankfurtFinanz I noticed that, but the room decor is the same (not that it matters). pic.twitter.com/k1Lgdd2R0W

FAVORITES
2

7:16 PM - 9 Jun 2013

John Wood @old_chap · Jun 10
@RexBrynen @FrankfurtFinanz Image on right - why is there a bra over the

Maureen Baginski		“Drake’s immediate superior”, “the third highest ranking official at NSA”.
General James Clapper		“Director of National Intelligence”. Gave a nervous testimony to Congress in which he denied massive domestic spying by the NSA (around 2013)
Richard Clarke	“Obama campaign advisor”	‘are you willing to kill as a president’ anecdote, also argued few people understood the true nature of the FISA Amendment (not reform but expansion)
Porter Goss	“Chair, House Intel. Cmte., 1997-04”	Roark’s boss, “the powerful chairman of the House Select Committee on Intelligence and future CIA director”
Colleen Kollar-Kotelly		“chief judge of the FISA Court”. After meeting with Hayden, gave her signature for the program which was in trouble
Laura Poitras	(not interviewed)	“documentary filmmaker”, one of “few journalists [Snowden] trusted”, part of the Hong Kong trip. Co-authored PRISM article in the Washington Post

Table : main actors in the modern history of NSA surveillance (21st c.)

Diane Roark is described “a top congressional intelligence staffer”.

Her self-presentation : “*I worked at the House Intelligence Committee for 17 years. And for the last five of those years, I had the NSA account for the Republican majority.*”

The presentation by Porter Goss, her boss, provides more details (given in a chauvinistic congenial that must be popular in certain political or intelligence circles, we imagine) :

> “Diane is the go-to girl on the House Permanent Select Committee on matters dealing with NSA. So she spent a fair amount of time at NSA. She knew personnel out there.”

Eric Lichtblau is also credited as the author of *Bush’s Law.*

Finally, in 2013 Google challenged a few National security letters (which at that point had been issued for a decade, if our calculations are correct).

Was Greenwald’s Verizon reporting the first to be derived from the NSA leaks? And, did the Mira being recognized as the hotel were Snowden was hiding what prompted him to “come forward” (as a CNN article from June 9th put it) or was it the reverse - coming forward caused the identification?

General James Clapper, the “Director of National Intelligence”, gave a really strange testimony in front of Congress, during which he kept nervously scratching his forehead while denying NSA domestic spying. To the question of Wyden, “Does the NSA collect any type of data at all on millions or hundreds of millions of Americans?” he answered no multiple times, shook his head sideways, on one occasion adding “not wittingly”, on another “inadvertently, *perhaps* ... but not wittingly”.

(Drake was accused of false testimony. Was Clapper?) Had Clapper not been a high ranking official, one could have easily assumed he was under the influence of some drugs.

could inadvertently, perhaps,
collect, but not wittingly.
GEN. CLAPPER
GEN. CLAPPER

Il. Clapper’s crack-cocaine Congress interview : maybe, perhaps, inadvertently, but actually no

Answers provided by Clapper appear to be directly contradicted by several documents, among others from the Foreign Intelligence Surveillance Court (such as the Verizon order).

Casuistic of the General Clapper aside :

A last effect brought out by the NSA leaks, not nearly sufficiently highlighted!, is that it brought out to broad day light the grand spectacle of U.S. American politics and the circus of so-called democracy under capitalism and the military-industrial complex.

Timeline

2001	October 4	“in a secret signing with Cheney, the president officially authorized ”The Program.””
2013		Google challenges 19 NSLs
2004	Spring	“grand dispute” over the program (in Hayden’s words). Must mean the conflict with the attorney general and FBI director...
2004	Fall	Colleen Kollar-Kotelly, FISA’s chief judge, re-authorizes the program (under a different legal theory)
2013		Google challenges 19 NSLs
2013	June	“Poitras and Greenwald headed to the airport. ... They were joined by Ewen MacAskill”
2013	June 5	Verizon article by Greenwald appears in the Guardian (as one of the earliest, if not the earliest of the NSA leaks stories)
2013	June 7	PRISM story by Gellman and Poitras appears in the Washington Post
2013	June 9	The Mira is recognized in photos of Snowden. Per Macaskill : “about midday he left his hotel room”
2013	June 23	“Snowden set off for South America via Russia”
2013	Dec.	Gellman travels to Moscow to interview Snowden

Special 17

Camille Akmut

February 16, 2024

NOTES ON “EFFECTIVE ACCELERATIONISM”

A lasting myth — whose latest, most aggressive expression is found in the so-called “effective accelerationism” movement out of San Francisco — can be summed up as follows : *if* one could only find the right technology, one could end all of humanity’s ills : poverty, the ecological catastrophe, housing, aging... - any number of problems, crises.

But this idea is both dangerous and naive : Its main danger consists in denying a role to politics, (i.e., from now social affairs should be conducted by philosopher-technologists and a government of polymath technocrats given free reign), while its fundamental naivety and even ridicule is suggesting that what the world is missing most, and needs most, is just one more killer app or hot start up idea, in other words a false anthropology : a humanity in need of corporations to heal, one more incubator to solve famines in Africa, another venture funding to bring world peace.

In their view what prevents this from happening are restrictions placed before innovation and technology (and ultimately capital). “Deceleration” - a term from which they derive their own, antithetic, identity, denomination. Here the ideological lineage is not difficult to recognize : In the way that theorists and apologists of the free market have continuously argued that failures and crises of capitalism are proof that limits on markets still existed (that they remained still somewhere, in areas in need of further examination and deregulation, instead of being issues or symptoms of that economic system); in a similar way, for capitalist technologists the biggest enemy is intervention, preventing the full expression of their genius and boundless manifestation of the next round of “disruptive” concepts. These technologists have repackaged old ideas from the Chicago school of economics in new terminology : “Deceleration”, in their vocabulary, is little more than a hip proxy for the old regulation, and the term most often found in discourse which sums up their discontentment with various social forces, the State, civil critiques of technology or capitalism, and worse both.

A difference is that economists from dominant or mainstream branches have become discredited in wide areas of the population - exceptional inability to foresee crises, dubious constructs like trickle down economics to crackpipe predictions and loony prognostics (the Internet is a fad, etc.) - whereas on the other hand computer technologists are still a sufficiently novel social category by comparison, whose theories and vocabularies hold a freshness that can be, at first at least, destabilizing and misleading. But, behind cool neologisms come some of the most conservative parts of the history of ideas. Their ideas, ironically rarely original - adapted from a melange of Machiavelli to Italian fascists - are repackaged in network theory, cybernetics lingo, or biological analogies (i.e. different parts of society act similar to nodes in a graph network...)

Alarms sounded about more technologies needed to achieve a utopian civilization, and supposedely negative forces preventing their progress, has for function to justify the continued expansion and proliferation of largely useless or harmful ones in our really-existing society. Ideas of purported slowing down of technologies are propagated by and to benefit the interests of technology circles, primarily their uninterrupted and hoped-for increased funding and enrichment, and act as a distraction from more thorny and vital questions such as the issue of ownership of technology, especially collective, and democracy at work.

Both groups - Chicago economists and San Francisco capitalists - make use of obfuscated terminology or complex tools (equations on one side, software on the other); yet technologists who argue, essentially, that separating humanity from an idyllic state is a Javascript app served by a store database that could potentially be prevented by a government overreach or State regulator, is no less improbable than teleological beliefs of Friedman et al. in a market that will one day reach perfection or an optimal state if only sufficiently deregulated, down to the last area of extent resistance...

Counter the idea of infinite potential held by technological progress, the acceleration of which the "effective accelerationists" are seeking, as bearer of solutions for humanity's problems is the observable reality of technologies being used for capitalist purposes under capitalism, that is empowerment of a few, instead of greater good.

Politics aren't solved by technology, while technology itself is highly political including the crucial issue of how technology is used, meaning in whose interest.

Bottom line : Technological options aren't a replacement for political decisions.

About the "effective" half, having covered the other : "effective accelerationists" likely identify or align themselves with "effective altruists" (another technology-adjacent social movement, once very popular, now discredited). In any case the underlying principle remains that they wish to present themselves as data-driven and data-informed and data-focused; simultaneously a lingering idea is that they are different from the State : wasteful, bureaucratic, old fashioned, not informed by big data as they are - in their view or presentation at least - etc. etc..

A last note deserves to be made : In a recent presentation, Gary Tann passed himself as a representative for, what he called, the "homo-techno" San Francisco. We find here the same use of identity politics to serve deeply conservative or ultra capitalistic projects, as elsewhere (a mechanism having by now even reached the intelligence agencies - which surely should know about information manipulation).

FILM — *No Maps For These Territories*

First 10 minutes are worth quoting almost in entirety, during which Gibson philosophizes about the big questions of technology while being driven around in a limousine, the slow death of humanity all the while simultaneously reckoning he belongs to the old order ...

The question opening this work - which cannot be called a documentary only, being itself a sort of experimental art project - posed to Gibson was : "How might humans become post-human?" He answered in a sort of stream of consciousness style leading to further and further reaches and next venues, all somehow connected. Gibson's distinctive slow speech when listened to long enough turns into a trance or incantation of some sort, evoking images of the cyberpunk landscapes found in his genre-defining novels. Gibson summons knowledge from areas as varied as computer science, economics, biology in a whole that ends up being satisfying if not convincing.[1]

Where we don't follow, or where we diverge, is the belief — contradicted by most cyberpunk, including Gibson's we believe — that advancements in technology would lead to any economic liberation as a matter of evident consequence. Nanotechnologies are a feature of many cyberpunk tales yet societies that they describe are ones (that continue to be) defined by strong divisions between rich and poor, potently expressed in large periphery urban slums, capsule hotels, back alley doctors...; while somewhere on the horizon are the seemingly unreachable, and de facto unreachable to most, giant skyscrapers and arcologies that are the luxurious habitats of the neo professional managerial class, faithfully serving and advancing the interests of the mega corps (as they do now).

On further reflection, it could be that the post-human state described by Gibson lies in a future even more distant than the cyberpunk worlds; which would, in turn, be a sort of intermediary, end of times, techno-apocalypse phase – where humanity is indeed on the brink of disappearing. Then followed by the next stage, i.e. that of the nano technology shapeshifters described.

> "Q. How might humans become post-human?
>
> It's technology-based and it's perceived to be the result of the advent of functional nanotechnology or of some sort of synergism in these various emerging technologies we have. So, if somehow there could be a synergism between [pause] computation and [pause] genetic research.
>
> Q. What might that mean?
>
> Well : immortality, the end of economics. Functional nanotech would pretty much guarantee both of those. Because there would be, you know, no reason to die. [laughs] If you had sufficient nanotech to keep resetting your little cellular clocks...[2] And even with sort of half-assed nanotech you can makes anything out of anything : so, you can make gold bars out of McDonald's burgers or McDonald's burgers out of garbage. But it'd be... there's no basis for this whole thing that we've always done about value. Anyone could have anything, *anything* they wanted, at any time.

---

[1] there is an unmistakable similarity with the recordings of philosopher/theorist/guru of drugs McKenna (including and up to music - of the ambient kind - and visuals - though less psychedelic).

[2] During this passage images of an adult Gibson fade to images of a baby, and back.

> And it would allow anything, including human beings would be completely protein. It could look and act like anything at all. It's a compelling vision, but it's just not one that I'm able to get, to get my head around. There's no traction for me there. It's the point where I really belong to the old order."

In other visions of post-humanity[1] bodyless powerful beings cruise computer networks; at first co-existing with human users, unbeknownst to them, later fighting out rivalries among themselves.

From 5 minutes onward, this segment cuts into another [as landscapes in the background turn from what could be California possibly L.A. to downtown, maybe Chicago, Toronto or New York] :

> "Well, I think what I'm most aware of is the extent to which people are unaware of the extent to which they've been interpenetrated [starts laughing] and co-opted by their technology, and I take it for granted that I've been (...)

No Maps For These Territories

This turn of the millennium work, (2000 per end credits), is a sort of *Holzwege*, or paths that lead to nowhere - the equivalent of Heidegger's ruminations on technology except for the modern era.

---

[1] e.g., Vinge (singularity), Ghost in the Shell's antagonist, Cyberpunk board games and adaptations (in CB77, a legendary female hacker has become such a being...)

EFFECTIVE ALTRUISM NOTES

Effective altruism is, about, to genuine altruism what corporate greenwashing is to radical ecology... Anyone having read the work of EA's main philosophers - i.e. Singer et al. - should be able to understand that "effective altruism" is just a nice label for a philosophy of philantropy directed at the elite, with particular attention paid to its technological fraction (mentioned in their works in several instances, as examples of proper giving) — even more so providing a moral justification for their existence. Google employees and executives from now on could feel a little bit better about themselves for giving away in the most effective manner that they could, usually to distant places, unburdening them from further introspection or reflection about their doing at home.

At a psychological level it might have been easier for them to give to far away places, Africa or the Middle East or Eastern Europe - where suffering was real, but geographically sufficiently distant to become abstract - than to care about poor and homeless people in their own neighborhoods; which would have inevitably led them to uncomfortable questions relating to capitalism and the role they played. A bank wire order, credit card or paypal transaction simply did not have the same funk...

And, here comes the illiberal part : Effective altruism was a calculated, brief and efficient form of altruistic interaction : In a way mirroring the no-strings practices popular in metropolises including San Francisco, transposing casual sexual norms to the philanthropic domain; whose logic appealed to the technologically affine mind.

Special 17-2

Camille Akmut

February 17, 2024

(Gibson's metaphysics, part two.)

Gibson's comments about a fully realized post-human, and already far advanced interpenetration of technology, are followed by remarks about the inability to go back to previous states of development (a conception he calls Rousseau-esque, and regards as a misconception) and reasons for it, primarily previously mentioned dependence, co-optation :

> "... I think a lot of people today have this sort of Rousseau-esque idea that it's possible for humans to return to the natural state, but, in fact, I think it's not. And, if it were, they wouldn't, they really wouldn't like it.
>
> I mean, I'm immune to a number of really, really terrible diseases, because I was inoculated against them as a child. I'm a male human in my 50s, and I still have most of my teeth. That's technology. I'm myopic to the point of near blindness and yet I can see. That's technology. It's too close to us to be very aware of it. If we were suddenly, if we could be stripped of it — which we can't be because it's actually altered our physical being[1], we'd be pretty unhappy, you know. And we'd start dying [laughs] big time.
>
> [cut]
>
> It's a strange thing, it may be a byproduct of what I do for a living but I probably worry less about the real future than the average person. We've gotten to the point where in some ways it's not knowable. When I was a kid we were told that it was : that was when, you know, when the future with a capital f was a very much ongoing concern in North America. That was part of our culture in the 50s : that the future was coming, and it was going to be planned, it was going to happen because grown-ups were making decisions. my childhood sort of was split down the middle by the Cold War : So there was one future that was very, very much the future of the Willy Lee rockets, missiles and space travel [pause] books; and the other future was a, sort of atomic wasteland.
>
> I mean it's very easy, it's *amazingly* easy for me to forget that I lived most of my life accepting that the world could quite literally and horribly end any moment.
>
> [cut]
>
> The only **memory** I have **of a world prior to media** is of standing in a peanut field on a farm in Tennessee looking down the hill at a black 1950s, sort of late 40s panel truck driving along a road.
>
> One of the next earliest memories is that my father is bringing home this wooden box like thing with a cloth grill on the front and a little

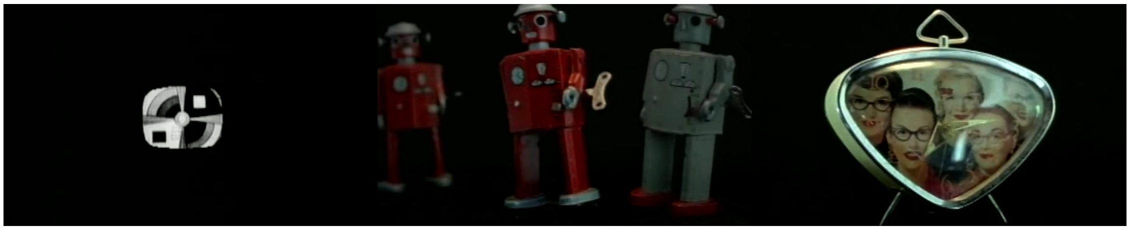
---

[1] in this passage there is a suggestion that we already live in a cyberpunk world, or at least that traces of it already exist in ours; that a fusion of technology and human being has already taken place : the examples of technology mentioned (glasses and vaccines) while not as impressive as the prosthetic limbs or cyborgs of cyberpunk novels announce or point toward that, augmented, future.

> round circular television screen, which I believe we had for some time prior to there actually being any broadcast to, to receive **and then there was a test pattern.**
>
> I think the test pattern preceded any actual broadcast for several weeks and the test pattern itself was only available briefly at scheduled times. And people, neighbors would come and they would look at **this static non-moving pattern on this, the screen that promised something and then television came.**"

In the passage where Gibson talks about technology ubiquity, being "too close to us to be very aware of it", images of the following items are seen :

a table clock/alarm, an iron, a torch lamp, a hand held computer/assistant, a kitchen utensil (to remove corks), a Game Boy, a portable camera, a fan, the next one we don't recognize (a device with the inscription 'Pagenet'), a blow-dryer, a lighter, another kitchen utensil (can opener), another camera, a lens, a multi-function knife, a robot toy, a car, a plane at an amusement park....



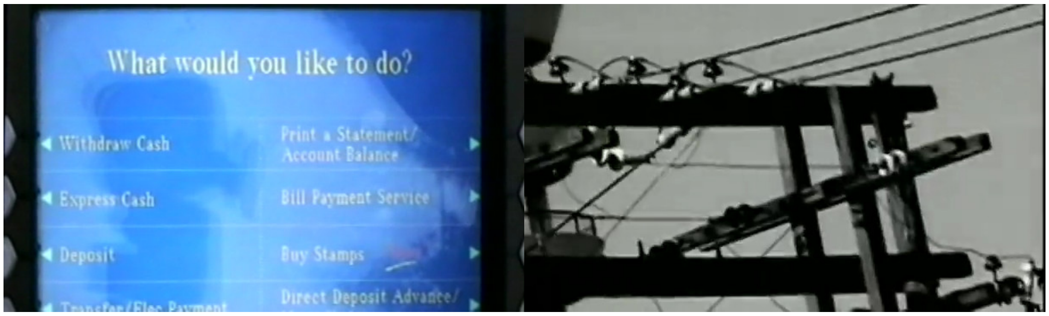
After the television test pattern story a cut occurs to the next segment, beginning with the ATM visit after a showing of *The Matrix*, and evolving to more general reflections about a growing "prosthetic extended nervous system" and concepts of "post-geographical feeling" induced by modern communication and networks, as well as disappearance of "non-mediated human beings" :

> "It's funny I walked out of The Matrix last night and went to an ATM and got some money out of my checking account in Vancouver, without even using a credit card, just using a bank courtesy card, and the ATM in Santa Monica told me exactly how much money was remaining in my account in Vancouver and just for a minute it struck me as miraculous. And kind of spooky. I had that feeling of, you know, that **post-geographical feeling**.
>
> I think **we've been growing a sort of prosthetic extended nervous system** for the last hundred years or so, and it's really starting to take. You know, it's really, it's really really starting to grow now. You're dealing with something that has penetrated virtually every corner of the human universe now.
>
> It's increasingly difficult to find people who have not been affected by media. **It's very difficult to find non-mediated human beings**,

> whereas in the 1920s you could go back in the Appalachians and record musicians who had never heard recorded music. And I think that music, those early recordings sound *fundamentally* different. It's something, **something very different was going on then and something changed.**"

Connected to this is the next anecdote : a diary entry relating a clergy man's surprise, and disgust, at hearing a recording for the first time - which to him sounded like voices from hell, and our comparative lack of strong reaction (being an indicator for the penetration of technology and its increased invisibility). Gibson uses this to, once again, generalize about the non-mediated world forming a separate country, a lost world.

> "I remember once but I was very, very struck by finding a diary entry, finding a diary entry somewhere that, where men had, a man had heard a Victrola for the first time. An English clergyman had gone to a garden party and he'd heard an Edison wax cylinder Victrola. And he'd come home and he was just *completely* traumatized by it. And he described it as being - it was you know, he said that he had heard a voice from hell, this undead hideous, hideous parody of the human voice and that mankind was doomed and how could god let such things be. It was, like, *completely sincere.*
>
> I doubt if he would have had the same reaction, you know the next time around but, you know this diary entry [occurred?] exactly the, the on the cusp of the change.
>
> Like we don't, you know, we don't find it extraordinary that, that we can hear the voices of the dead whenever we wish to. The non-mediated world has become a lost country and I think that in some very real way it's a country that we cannot find our way back to. **The mediated world is now the world.**
>
> **We are that which perceives a mediated reality.**"



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Gibson's ideas constitute a worthy and interesting addition and extension of the metaphysical tradition. Based on his views, the defining feature of a human in the modern technological civilization is their mediated condition in the world, and their mediated perception / of it.

Hence the extended cogito ergo sum rule - extended to modern times, in which media are everywhere - now reads : I think in a mediated fashion, therefore I am.

In contrast to Descartes, or even Plato, the prowess of the new philosopher is not to successfully battle a metaphysical demon, or to see beyond a cavern of illusions to reach the world of ideas, but to recognize - and in doing so extract oneself from, to some degree, if not completely possible - their own mediated condition, and to start reflecting on it.

Gibson's discourse in this film has a place, or deserves one, next to the classical works of metaphysics.

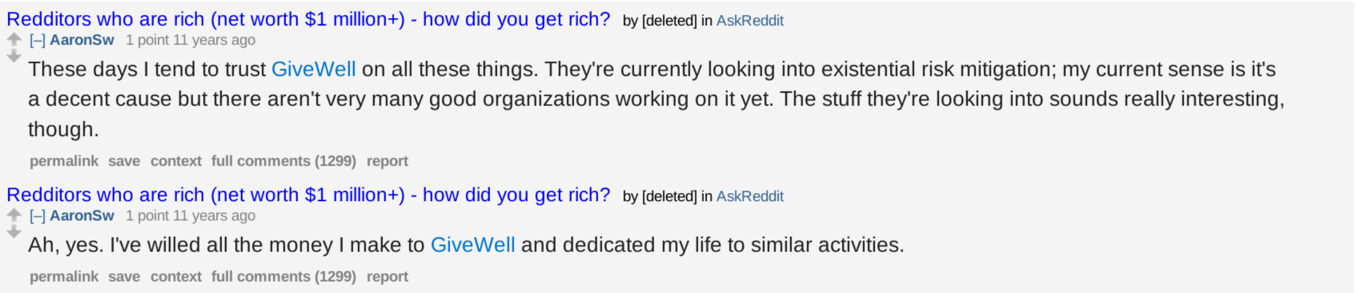
Despite constants in the human condition, obviously neither Plato nor Descartes, even Heidegger, are able to account for radical changes having occurred since, i.e. the technological world, in which the thinking subject is now completely placed.

MORE NOTES : EFFECTIVE ALTRUISM

Giving a measure for effective altruism's - intact or mostly intact - reputation at the time : Aaron Swartz endorsed GiveWell and made it the beneficiary of his will (as documented in one of his last messages on Reddit from mid-2012).

Swartz had understood and foreseen many of computer technology's challenges, in addition to being the creator or co-creator of an impressive amount of them, but he also remained deeply embedded in technology cultures, the world of start-ups and venture capital (his friendship with Graham and co.), the EFF crowd (a weak reformist organization) and EA circles preventing him sometimes from seeing the truth about them.

[GiveWell is a poster child for effective altruism with its focus on Africa, mosquito nets program etc.]



Redditors who are rich (net worth $1 million+) - how did you get rich? by [deleted] in AskReddit
[–] **AaronSw** 1 point 11 years ago

These days I tend to trust GiveWell on all these things. They're currently looking into existential risk mitigation; my current sense is it's a decent cause but there aren't very many good organizations working on it yet. The stuff they're looking into sounds really interesting, though.

permalink save context full comments (1299) report

Redditors who are rich (net worth $1 million+) - how did you get rich? by [deleted] in AskReddit
[–] **AaronSw** 1 point 11 years ago

Ah, yes. I've willed all the money I make to GiveWell and dedicated my life to similar activities.

permalink save context full comments (1299) report

old.reddit.com/r/AskReddit/comments/rqejz/redditors_who_are_rich_net_worth_1_million_how/c4e7n4h/ and */c4gty6y/* April 19 and 26, 2012
"Redditors who are rich (net worth $1 million+) - how did you get rich?"

Special 17-3

Camille Akmut

February 18, 2024

"I don't think it's possible to know what we've lost. We just have... I think there is a pervasive sense of loss, and a pervasive excitement at what we seem to be gaining. And they see those, those two feelings seem to go together, right, in effect to be parts of the same feeling. It's like Frederick Jameson's postmodern divine. You have it right there : that sense of loss and a sense of Christmas morning, at the same time.

I think that most people - myself included - are most comfortable conceptually living about 10 years back from whatever point in time we've reached; and I think we all have these moments that are vertiginous and terribly exciting and very frightening in which we realize the contemporary absolutely and I think it induces terror and ecstasy and we retreat, we retreat from it because we can't stay, we can't stay in that state of panic which is I think the real response to what's happening to us. We're more comfortable with an earlier version of who we were, and what we were : it makes us feel more in, more in control.

I think the last time, the last time I had one of those CNN moments, where I was slammed right up against the windshield of the present would have been flipping on the television one day and seeing that federal building in Oklahoma City [inaudible] and listening to a little bit of the audio and getting the idea that something, something bad had happened in Middle America. So very, very deep within me something seemed to say everything is different, from now on, something very fundamental has changed here.[1] Somehow, whenever something like this happens and I have one of these moments it ups the ante on being a science fiction writer. It changes, it changes the nature of the game.

Another example, maybe a better one in a way was when it was when it was confirmed that Michael Jackson was going to marry Elvis Presley's daughter. A good friend of mine in the States faxed me and he simply, he said 'This makes your job more difficult' and I knew exactly, I knew exactly what what he meant. Because something that seemed to, a scenario that seemed to belong to the universe of the late Terry Southern was suddenly suddenly real. It's that that truth is stranger than fiction factor keeps getting jacked up on us on a fairly regular, maybe even exponential basis. And i think that's a peculiar, it's something that's peculiar to our to our time. I don't think our grandparents had to live with that."

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[1] It is notable that in this documentary from 2000, Oklahoma was the event that Gibson could think of first. There is little doubt that by the end of the next year, 9/11 would been mentioned as a (televised) moment where, per Gibson's expression, one is "*slammed right up against the windshield of the present*", in which "the contemporary" manifests "absolutely".

While Gibson is speaking about vertigo of modernity and the contemporary, images of graffiti are shown with messages like : TECHNOLOGY IS THE KNACK OF ARRANGING THE WORLD SO WE DON'T HAVE TO EXPERIENCE IT.

After the above, [at which point the 17th minute has been reached], a passage of *Neuromancer* - arguably the most iconic, in that book, and best known of all - is narrated : about "*the sky above the port* [being] *the color of television*"... stories overheard and rumors spread in the Sprawl...

Sections containing metaphysics of Gibson at this point don't end but are contrasted or supplemented by a more literary analysis of his work; where it could be argued that the metaphysical analysis continues albeit in a diverted, indirect form, providing echoes of his philosophy.

About the segment read out loud - provoking repressed laughter in the author - he notes : "It sounds good. It sounds like it was written in the 1940s somehow." then laughs. "It really is kind of weirdly Chandler-esque."

The remarks can be considered as connected or connecting, in some way, to previous statements on different time spaces colliding (e.g. the lost world of non-mediated experiences continuing existing as relics in the mediated world, or the Jackson-Presley marriage).

Excerpts of Neuromancer contain themselves aspects of Gibson's philosophy such as the bar frequented by "professional expatriates" where Japanese is seldom or never heard — again suggesting the existence of worlds within worlds — and especially descriptions of its barman who holds on to a prosthetic arm (an antique Russian military model) and to his physical flaws "in an age of affordable beauty"; in that age his (hold on to) ugliness has become "legendary"... In other words : more instances of the old and the new existing at the same time, and attempts to preserve humanity in an age where is already fast fading away.

[It could very well be that the barman Rats was of an outward appearance that would have been considered to be average beauty in our age, but in the age of mass plastic surgeries and body modifications of Neuromancer it had become or moved from average to ugliness per the dominant norms of that time period.]

Gibson is asked the question : 'So what would you say now about that piece of writing and the man who wrote it?' answering "I don't know... You know, I'd buy him a drink but I don't know if I'd loan him any money." Further,

> and I think of Neuromancer as being, in a good sense, an adolescent book. It's a young man's book, it was written - very young man's book, that was written by a man who was not very young when he wrote it but who was sufficiently immature to still get, still get back there and get out, get a hold of that stuff."

morning at the same time
sense of loss and a sense of christmas
E?
Technology is the Knack
of ARRANGING The WORLD
SO WE DON'T HAVE TO EXPERIENCE
IT

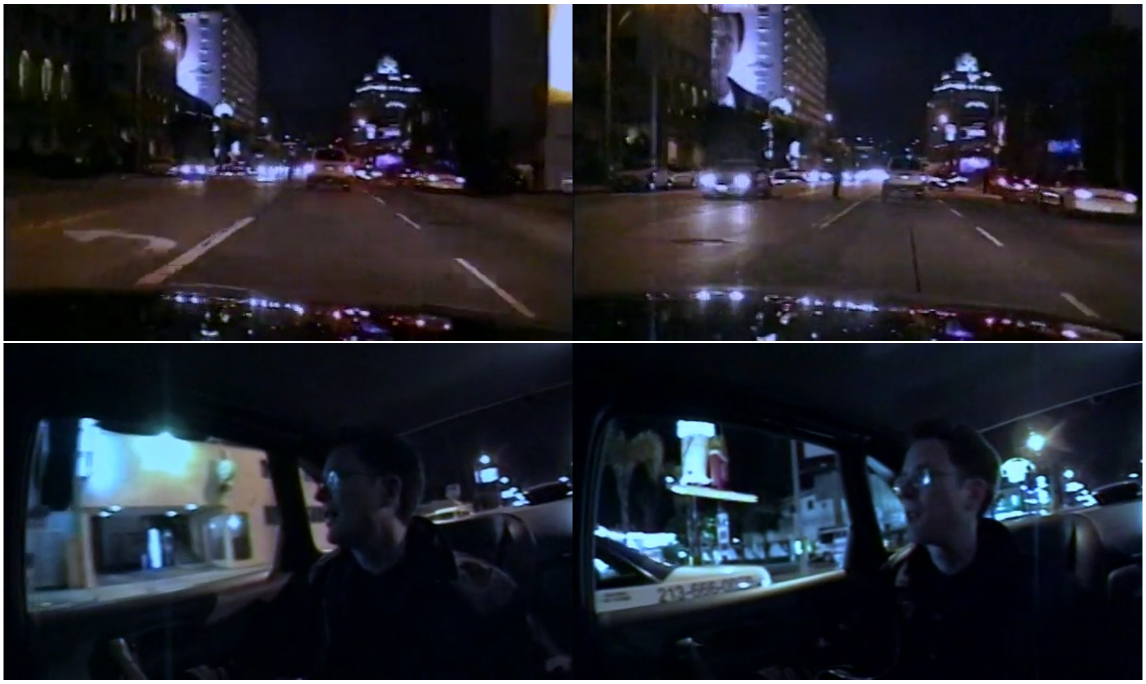
More passages are read, containing more of the curious, off-beat characters from that world. Prompting the comments :

> "It's a world without... It's a world where there aren't families. It's, you know, it's the world of a young person going out into the wilderness of cities and sort of in a way creating, creating a family. It's very, you know, it's kind of like : it's not that it's a goth book but it's kind of out of the same stuff that makes kids be goths.
>
> (...)
>
> I think the disappointment that I sometimes sense in younger readers who finds Neuromancer and really really like it and then find my later work and they're like 'Whoa why can't you please do more, do more like this' and I have to say well I just can't you know, I don't have have access, I don't have access to that, that material now and if I did I would probably be in in grave trouble. It just wouldn't be natural, it wouldn't be natural. It'd be you know, it'd be bad news if I could - if that's where where I was. In a way it was I think, it was some, personally it was kind of bad news at the time that I was, I was where I was then at that age."

We find here the same impossibility to access previous states. (Except transferred to the task of the writer, based on the condition of the writer.)

From there, 23m, Gibson's itinerary post-Neuromancer is evoked :
meeting Bruce Sterling at a convention, and like-minded writers, *Burning Chrome* (containing the word cyberspace), the alien nature of that prose etc.

As Gibson talks, urban scenes convey the impersonal world - and even to some degree the impersonal style - of Neuromancer, and in which that novel itself is written in : lonely shady bars, vehicles moving late at night whose drivers must be there but are not seen — "the world ... without families" evoked. In which humans have disappeared.



On the other hand their creations, product of technology are most prominent - cars, high rise buildings, lighted signs, bridges...

In fact the only humans that can be seen are on reproductions of humans (e.g. on billboards).

Amid this large-scale loss of human life, the cyberpunk author appears increasingly less and less human; as if a traveler from some other place or time, an alien, future historian recording vestiges of our world.

NEWS

— “CDC taps Palantir to support COVID-19 drug supply in U.S.” *Reuters*, Feb. 2022.

“*The Centers for Disease Control and Prevention (CDC) has awarded Palantir Technologies Inc a $5.3 million contract to manage distribution of COVID-19 drugs in the United States, the software maker said on Tuesday. The contract for supporting distribution of therapeutics is for a duration of six months, Palantir said. The new partnership is an extension of an existing use of Palantir’s Tiberius platform for vaccine distribution, for which the company was selected in 2020.*”

This is one of those stranger-than-fiction moments, straight out of Deus Ex storyline... and where reality becomes so absurd it catches up to material that a decade ago would been the domain of conspiracy theory. ‘Shadowy defense company becomes contractor to CDC in drugs/vaccine scheme’.

In fact, it’s below fiction at this point because not even a poorly written, parody cyberpunk video game would be so obvious; they’d come up with something more original. It’d be a rumor circulating in the underground, but not an actual, factual news reported by a major news agency.

It is events and pieces of news like this one – which are like pieces of the new world – that justify calling our period post-modern, because evidently we must have reached some other place; where news becomes so unbelievable that fiction recedes. (When did the Christening of this new world exactly begin?)

Special 17-4

Camille Akmut

February 23, 2024

The metaphysics of Gibson (part 4)

Following a middle section that is more biographical in nature, the more philosophical sections resume after the one hour mark.

There is a certain connection between Gibson's life and the substance of his writing : he had lost both parents by the age of 19, took a bus to Canada (to avoid being drafted into the Vietnam war), experimented with drugs, Burroughs functioned as an idol or role model...[1]

Gibson's view of religion is notable : "I think of religion as franchise operations." His materialist, unromantic critique reach a height with comparisons to KFC... Organized religions appear to be the primary target, leaving some room for individual spirituality ("sort of like chicken franchises, but that doesn't mean there's no chicken right." - as indicated by passages like this one)[2][3]

Gibson argues a driving force for technologies, new media is pornography.

> "Q. Is that how you thought it would turn out?
>
> No, no, not at all. I mean I just didn't imagine, I didn't imagine that art girls and the Midwest would be flashing their tits in cyberspace, although I'm glad they are.
>
> I was in New York and we were looking at, we were down at the Chelsea Antique Market looking at Civil war era pornography - hardcore like Matthew Brady hardcore! and I never knew that this stuff existed and it ranges into everything from cheesecake, some of which is totally charming, cheesecake to just the rawest full-on hardcore.
>
> You know, daguerreotypes the technology was new, the technology was there for the first time to reproduce pornographic photographic images. And because there were these Union armies, you know there were tens, hundreds of thousands of lonely wanking soldiers marching across the United States so, you know, the American porno industry was born there I suppose. Like, it's modern, you know **the Larry Flynt world was sort of born on the battlefield at Gettysburg.**
>
> And, there's a market for this stuff, there's a very serious collector's market and I have a friend named Richard who's by day a dealer, a

---

[1] These are the passages from c. 29 to 40m.

[2] spirituality and religion sections are found around 45m.

[3] Books for *Cyberpunk* games, echoing Gibson's take on religion, give an overview of existing religions - primarily found in the form of sects - in which the overall impression is (in fact) that of a fast food menu, catering to *diverse* needs and sensibilities, covering all or most individualistic tastes and options. A sort of menu a la carte of religious offering. They form a religious market place composed of lifestyle, customizable or indeed designer religions, which would be appealing to the needs of mass consumption and the big cities, and populations habituated to choice in all other areas (fashion, sex-gender, holidays, chicken buckets etc. etc.); while also providing much needed, instant answers to simultaneously intervening radical capitalist changes and resulting poverty and desperation.

> dealer in rare books and by night a dealer in Civil War porno. My friend Richard reminded me once again that **new media is always driven by pornography, almost always, any new media that gets out into the world.** For instance it wasn't true of television but television was a broadcast medium : as soon as television became home video a lot of developments in it was, like what you could do with it were driven by the desire to create pornography. He said that as far as he knew the most sophisticated marketing and billing on the Internet was, was Netporn those are the guys who have been doing e-commerce all along."

One of the attractions of Gibson we think - who has enjoyed widespread recognition and success - may be that he is able to say, partly very profound things about technology without ever saying the word capitalism; which is both impressive and frightening.

From his renderings one could almost get the impression that technology exists in some sort of vacuum, without any influence by an economic system; and easily forget its major, shaping role. The closest he comes to any economic, especially political economic analysis are his theories on pornography as the driver of new media.

The above cuts into a segment on origins, present and future of the Internet. As for the latter Gibson had / defended a particularly optimistic view at the time : that of the Internet as, ultimately, ushering force for the fall of the nation State or nationalism. Which, today, has become (much) harder to defend : A quarter of a century later and it would be difficult to claim that any such thing has come true (it could be said, on the contrary, that an opposite movement has taken place, with nationalist and racist feelings well and alive, at least more visible); but as with all such teleological pronouncements one could argue that more time is needed.

[1h12-15] [1h15-18]

> "A couple of years ago Bruce Sterling came up with a scenario in which it was discovered that there was no viable way to make money or really make serious money on the Web, and the Web would become a sort of ghost town and it would be re-inherited by the sort of crazy people who who were there in the first place; the corporations would all go home and it would all be a sort of giant ghost site.
>
> Well my understanding, such as it is, is that the Internet exists today because DARPA, a federally funded think tank was asked by the Pentagon to create a communication system that would survive a major nuclear war, global nuclear war. DARPA came up with the idea of connecting the mainframe computers, existing mainframe computers in universities in the Western world in a switching system

> that would allow the communication to be carried around problem areas - say a Chicago that no longer existed - and if this switching was sufficiently fast they'd be able to communicate right through, right through the event of the nuclear war regardless of which cities were being vaporized.
>
> So these university mainframes were connected and what we know today as the Internet grew out of that as a completely unplanned side effect. And I'm, I rather believe that if that, that side effect could have been foreseen, the people who ordered, you know the people who ordered those, those mainframes connected would have had second thoughts. Because it will eventually bring about their extinction [laughs], to a large extent, it will bring about the extinction of the nation state, as we know it. And that is an unplanned impact of technology."

Then Gibson expounds on his conception of technology as an extension of the human nervous system (and in doing so arguably continues to advance the idea that cyberpunk elements are much more present, already, in our society than one may think) :

> "**We're using technology to extend the human nervous system.** We're sort of... you know **the Internet is a kind of global prosthetic extension of human consciousness. It wasn't consciously intended as one but it amounts to one. The Internet, if one could see its totality, I think would be a very profound expression of what it is to be, to be human today.** (...) it's almost meaningless to say, even now, because it's become the place where we do everything, it's become the place where we look for everything.
>
> [cut]
>
> We're doing something new here, it resembles some things we've done before, but it's different : I think it's probably as big a deal as the creation of cities."

[1h18-end]

As Gibson talks about the totality of the Internet, images of search queries are shown such as 'solar eclipse', 'DIY bomb', 'Monica Lewinsky', 'Men's 100 metres', 'marijuana', 'ozone layer', 'liposuction', 'love', 'impotence', 'god'...

Emergence of cities - the importance of which Gibson sees in the Internet also - was a major development, permitting capitalism, the creation of the universities, and human sexuality in particular homosexuality among many other cultural or social phenomena connected to the growth of urban spaces.[4]

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[4] c.f. *Intellectuals* by Le Goff describes this trend in general well... Monographs on the flourishing of non-heterosexual populations in major cities of the Middle ages, e.g. Florence.

Gibson, pursuing his thesis of technological inventions as an extension of the human body, refines it by restating technology as an evolutionary trait of the human species; an evolution whose purpose, end goal and total architecture however remain elusive. At the end of the interview G. converges towards the last question of traditional metaphysics - Why is there something rather than nothing? - having successfully adapted it to a modern, technological context :

> "Q. a number of your characters are searching for meaning in cyberspace. Laney and Idoru looking for patterns in the flow of data. Gentry, in *Mona Lisa Overdrive*, looking for the overall shape of cyberspace.
>
> I mean, I think for me that's the nature of experience, is sensing through all this stuff that we're moving through some huge structure that's too big to get a handle on; And the question is then how important is it, why are we drawing back to that, why do we do that... You know... **Why do we, in evolutionary terms, why do we do that stuff? We seem to do it as a species : what is it, what is it in service of?** We've been doing, you know we've been trying to do that forever : why? You know I wonder why we do it, I mean here we are, bipedal mammals with opposable thumbs and overgrown frontal lobes, creating this wacky collection of artifacts that we're moving through now and sitting in and recording on.[5] Why do we do that? How did it come to be? You know. What is the shape of that, if we could see it from without - which we can't, because we are it. It's just basic curiosity. What's going on here? Why am I here, what's it all mean - if anything."

As a conclusion to this passage, Gibson explicitly states that his work is a place where he continues to explore these philosophical ideas in fiction.

Previously, the creation of the word cyberspace was explained as arising from the need to find "a signifier of technological change" that differed from established ones ("I needed to replace the rocket ship and the hollow deck")[6][7]

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[5] In a strict sense, here Gibson means the highway, car and camera.

[6] c. 55m.

[7] Genesis of the term cyberspace given back then - e.g., "I saw it emerge on the page" - diverge from recent interviews where a far more interesting, diverging - though not necessarily contradicting, just incomplete - backstory is told. Apparently he listened in on conversations by technical people (at bars if we remember correctly) and was inspired.

ghost site
it would all be a sort of giant

(A question asked by Gibson - we attempt to furnish some cushioning.)

When did it all begin?

One obvious answer is the invention of the computer. That answer has a sort of vague clarity and definiteness, and immediacy to it, which is both satisfying and highly misleading, because not much of an answer in fact is provided by it. Instead if shifts the problem away some more.

Are the 17th and 18th centuries mechanical computers meant? Who is responsible for our current state or predicament? Pascal, Shickard and Leibniz? Punch card machines? Transistor electronics? The BBN router through which the first message passed? Personal computer and ethernet experiments at Xerox? Intel's first CPU? Did free software and open source accelerate capitalism, by providing companies free labor to coincide with the personal computer and software boom of the 1980s, 1990s? What seemed an unambiguous answer turns out to be more difficult.

Special 17-5

Camille Akmut

February 24, 2024

Gibson's metaphysics overview :

Part 1 ——.
Part 2 ——.
Part 3 ——.
Part 4 religion.
Part 5 drugs ("mind altering substances")

Continuities between Gibson's metaphysics, (exposed in this documentary), and his fiction are found in several of his novels. In addition to Neuromancer, Idoru can also be cited. Rez is described as "*very possibly the last of the pre-post-human megastars*".

Exposure to Gibson's later, mature philosophy - a distance of over a decade separates analysis in this documentary from his best known literary work - in general greatly enhances the understanding, and enjoyment, of his fiction.

As is the case of many science-fiction writers, especially authors who can be assigned to the cyberpunk sub-genre, (Huxley, Dick, Herbert in particular[1]), Gibson has a pronounced interest in drugs. However recollection of his drug experiences and drugs period end in a denunciation (as a "wank") and a bitter description of users as biochemically altered, indistinct beings - closer to vessels through which drugs communicate their effects rather than individual personalities.

Again, in passages like this one the Leitmotiv is furthered of a cyberpunk future - not yet fully realized, and lacking in its most ostensible manifestations - being closer to us than we think. Consistent with previous expositions, a point that Gibson seems to make throughout is that elements of the new world are already present in the old one (even if less pronounced than in his novels, or cyberpunk works by others).[2]

> "What you couldn't have told me at that stage in my life, what I couldn't have told me at that stage in my life that I've subsequently come to, come to accept, is that all drugs - **all any drug amounts to is tweaking the incoming data. And you have to be incredibly, really incredibly self-centered or pathetic to be satisfied with simply tweaking the incoming data.** Enough of the right drug and anything is groovy, enough of the right drug and it's okay to be having open heart surgery, well you know who wants that...
>
> My experience has been that beyond a certain point there's only pathology : you're not dealing with a personality anymore, you're dealing with a kind of hardwired, hardwired pathology, you're dealing with a chemical entity, a neurochemical entity. It doesn't really have much to do with who the person it's manifesting in was.
>
> Recreational drugs are essentially a wank, and a wank is okay, but it's : you really should know that it's just a wank. And I think

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[1] Doors of Perception/mescaline, BNW/soma, Dune/spice, A Scanner Darkly...

[2] e.g., *Cyberpunk 2077* gives a potent visualization of the future of drug addiction, where users - when not zombies - regularly go berserk during dramatic episodes covered by the media.

> that's what we didn't know - to use the generational we - and what some of us still don't know.
>
> I was kept from the opiates by having read Burroughs. I knew from even before I'd ever tried any mind-altering substances that heroin was really addictive and that you thought it wasn't and you began to take it but then you discovered that it was. You know the opiates aside I tried whatever was going, you know I sort of prided myself on it.
>
> In fact I was sort of a very regular cannabis user for a number of years; in spite of the fact that I always had a terrible time with it. And you know I've long since come to realize that I suffer from cannabis dysphoria, like this lowest possible dose of Cannabinol makes me incredibly uncomfortable and unhappy."

[30m f.]

Generational "we" found in this refers to the generation who experienced the late 1960s, especially the 'Summer of love' (mentioned by Gibson in another part of the interview, before the above). Gibson, born 1948[3], hence was about twenty by 1968.

Among others, Gibson's experiences with the Toronto crowd of American expatriates likely directly inform his (pessimistic) view of drugs and their users.

That, preceding, passage gives more insight into his views on the subject :

> "[After going to the induction center] I went home and bought a bus ticket to Toronto but it, I don't like to take too much credit for that having been a political act, in the sense that political acts are sometimes understood. It had much more to do with my wanting to be with hippie girls and have lots of hashish than it did with my sympathy for the the plight of the North Vietnamese people under U.S. imperialism.
>
> Consequently, when I got to Toronto I, actually to my I think chagrin somewhat, I found that it was, I really really couldn't handle hanging out with the American draft dodgers : there was too much clinical depression, there was too much suicide, it was too much hardcore substance abuse; they were a traumatized lot those boys and I just felt like, you know, I felt frivolous.
>
> Toronto's Summer of love was, it was up there with San Francisco's - I would imagine. It was really quite a party. Sort of an alternative mode of perception

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[3] 37m. (in the more directly autobiographical sections concerning childhood)

Gibson's background as a hippy of the sex-and-drugs-and-fun kind — as opposed to having been among the political radicals of the time — may also inform his tendency to talk about technology while avoiding the more explicit economic dimension, in particular capitalist ramifications. And, also his broad appeal and why he may be favored in that very same economic system...

[That the word capitalism should be so consistently and systematically suppressed in his discourse, and should have been so thoroughly removed from his language — never appearing even once after almost 1 hour and 30 minutes! — must be noted as an extraordinary fact, again both admirable and astounding, for a talk concerning modern technology.]

There is little doubt that to the hears of publishers and publicists, biological analogies and computer neologisms must have a better ring, and are easier to swallow/sell, than talk of class, class interests, infra-super structure relation...

Special 18

Camille Akmut

February 27, 2024

BOOKS (FICTION) AND FILM

— Philip K. Dick. *A Scanner Darkly*

A Scanner Darkly, after Scott's Blade Runner and Verhoeven's Total Recall, is among the most important and artistically meriting adaptations of Dick's work. It is representative of the drugs component of cyberpunk - heavy emphasis - though other aspects of technology are represented : in particular notable are the scramble suits, which are Scanner Darkly's most iconic tech and contribution. Followed by advanced surveillance including (artificial intelligence) identity recognition, based on voice e.g. from phone conversations.

The drug at the heart of A Scanner Darkly is "Substance D"; a fine addition to the famous drugs of science fiction, from Huxley's interest in mescalin to soma through spice... In the future depicted, "Nearly 20 percent of the population can now be classified as addicts." per one introductory presentation.

As a rule it could be said that every good cyberpunk needs at least one evil corporation. Likewise, New Path is a worthy addition to the list of companies appearing in S.F. and related fiction (cf. the fictional companies created by Pynchon, Dick, Gibson, or found in Alien, Deus Ex...).

New Path in turn is described, from different perspectives : "as far as anyone can tell, there is but one company that is helping this situation" and, in another dialogue, as "A seemingly voluntary, privatized gulag managed to eliminate the middleman of public accountability and free will."[1] An unusual characteristic of the company is that, unlike everyone and everything else, their location can't be scanned.

```
Fred - How did New Path rig it? They're the one place in our entire country that can't be
       scanned. All the rest of us can be tracked 24 hours a day. (...)
Hank - Hey, that's their contract with the government.
```

[2]

The beauty of Scanner Darkly is that the same company which is the main for-profit rehabilitation center for D, is also the producer of that substance... At the same time, publicly, claims are made that it has origins in terrorist organizations in foreign countries (which the USA bravely battle).

Accidental invention of the scramble suits at a private laboratory, as described in the novel, mirrors vaguely that of the discovery of LSD. Another hint is that the inventor of Substance D is "in Germany or Switzerland" (in the novel still).

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[1] [4 and 13m]

[2] [18m]

Among the central issues and themes are those of identity, the nature of truth and perception, and information manipulation, in a civilization where physical appearance has become a malleable accepted notion (most prominently through the aforementioned scramble suits) and minds and memories can be radically altered through pharmaceutics, drugs.

In the next paragraphs we develop, and extend, these ideas of loss of traditional notions of identity and integrity of the individual at more length. Always questioned - as is the case in the best of science fiction - is the status of humanity in a new setting.

A Scanner Darkly features heavy police surveillance, especially visible in the case of the house, (n. 709 of an unspecified street), although it is understood that tools such as voice identity recognition in wiretapping could be applied to the whole population.

Nothing is simple anymore, or quite as it seems. Behind pot comedy allures of a dysfunctional, colorful houseshare is another reality : Fred is an undercover agent, Barris is an informant, Donna is a double or even triple agent... But layers of reality don't stop there. In addition : Fred is betrayed by his agency, Barris was led on, Donna - despite being at a higher strata or echelon of betrayal - herself possesses limited information, as becomes clear in the final dialogue, and is also a lowly piece played.

Addicted users develop hallucinations, among others, while long term effects are mysterious, unknown. Per Barris' explanation, "Well, like the old-school pharmacopoeia, a tolerance develops, you know. These visions of bugs, they're just garden-variety psychosis... but a clear indication that you've hurdled over the initial fun and euphoric phase and passed on... to the next phase. News from the guinea-pig grapevine suggests that what it is... we won't know until it's way too late, you see? You see that we're all canaries in the coalmine on this one?"[3]

Alex Jones is kidnapped [van'ed] by the police during one of his megaphone street speeches (characteristic of his early public appearances and monologues with Libertarian accents) : He denounces the war on drugs and resulting surveillance as an assault on freedoms. His derisive remarks about the police - about 'protecting' us from ourselves - is also typical of his early work (on the so-called police state, and police overreach).

> "*Where did Substance D come from? Why can't we stop it? The bigger this war gets, the more freedoms we lose... the more Substance D is on our streets. Can't you figure this out? Look around you. Look how far we've come. Humanity wasn't meant to live like this. Our every waking moment tracked and traced and scanned. It's time to*

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[3] [15m]

> *stop submitting to this tyranny. It's time to realize that we're being enslaved. [police van approaching] Oh, oh. It's our tax dollars at work. Protect us from ourselves. Hey, guys, I used to be one of you. Stop selling out your own species.*"

A detail may provide some more context : in one brief scene, a member of the police can be seen reading a magazine, looking irritated, with the headline "Alex Jones runs for office". Jones' political campaign could have deranged the existing order, disturbed the status quo favorable to profit-making and may have menaced to dethrone whichever pro-New Path politician was in place.

Jones' appearance and end (tasered by the police and transported off to nowhere) carry the same nauseating, conspiratorial overtones as much of the rest of intrigue. His questioning of the drug's origins was on the right path, and critique of erosion of freedoms in times of epidemics coherent or plausible. He is the only active, organized opposition seen in the film. Dire times are reached when Alex Jones is the best ideological option...

Mind control is accomplished apparently in the rehabilitation centers, clinics where the protagonist has seemingly been turned into a Pavlovian marionette, echo machine after his admission to one of them.

Scanner Darkly ends on the dark paranoid note of the addicted growing the crops of their own addiction, drugs.

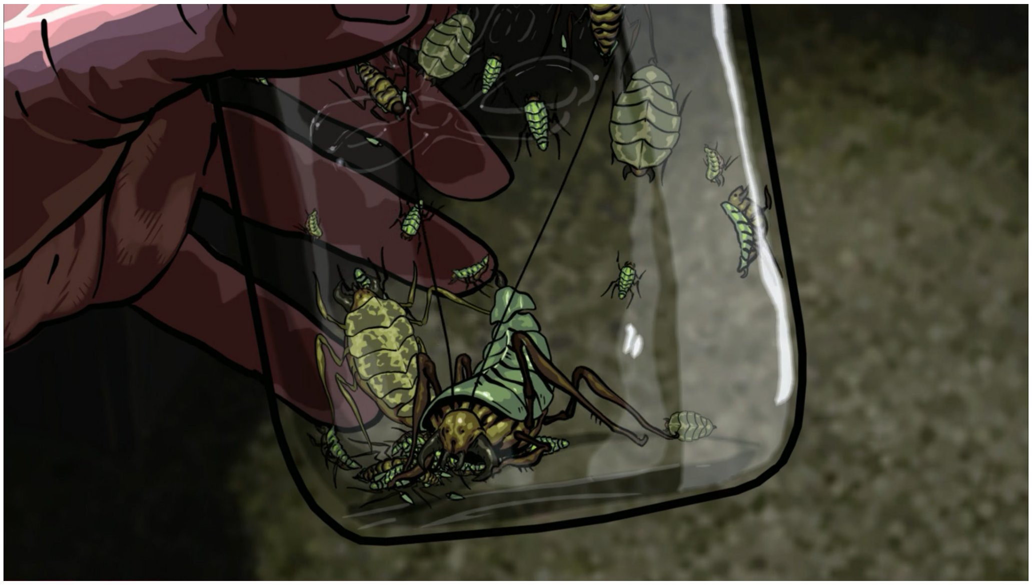
Finally, various elements hint to a vicious and predatory capitalism being at work in the background, e.g. ads for 50-500 D. loans... [c.f. the scene where Freck's head is blown off by a cop.]

Linklater's focus on underground and youth cultures (resulting in some of his best work : Slackers, Dazed and Confused) obviously comes to benefit the adaptation of A Scanner Darkly. The film continues the line traced by The Conversation, Parallax, Days of the Condor... becoming a new classic of paranoia and conspiracy cinema. As the novel itself prolongs Kafka and Pynchon.

As far as we understand autobiographical aspects of Scanner Darkly : Bob Arctor is a fictionalized version of Philip K. Dick, as the owner of a, now, derelict house inhabited by various demi-monde figures, but shown in flashbacks as a happy middle-class home with Arctor wondering how things could have come so far. Donna is Dick/Arctor's frigid partner - which in the fictionalized version is explained by the fact that she is actually working deep undercover and betraying Arctor.

Furthering the blurring of objective and subjective realities and perception, there is a sense that at least some of the scenes in the film are recollections rendered in the protagonist's mind while at the recovery center or while working at its farm outposts, or even later : especially inclusion-injection of impromptu lines about "blue flowers" and "you read my mind" at 1 hour (as his advances are once more rejected by Donna), or repeated suggestions and inquiries by medical staff about giving flowers to Donna ("Did you give her the flowers?"); or even the early, also somehow out-of-place, out-of-time line "Yeah, we're all dreaming." In this interpretation, the events are meant to reactivate his memories and enable completion of the task, mission i.e. collection of evidence for New Path being the domestic maker of D.

In A Scanner Darkly one cannot rule out that, after some point - if there even is such a demarcation point - the line between reality and augmented perception are becoming inextricable to such a degree that everything may be a deception, figment of imagination. And that indeed we are all dreaming...



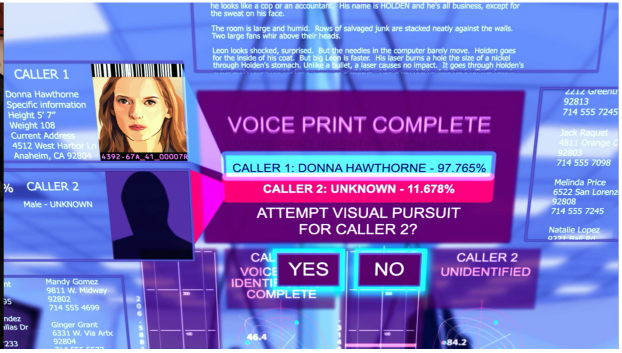
Il. visual hallucination in advanced D users

ALEX JONES RUNS FOR OFFICE
CONTROL GRI
member of our family...

The bigger this war gets,
the more freedoms we lose...

Yeah, we're all dreaming.

Stop selling out your own species.


CALLER 1
Donna Hawthorne
Specific information
Height 5' 7"
Weight 108
Current Address
4512 West Harbor Ln
Anaheim, CA 92804
CALLER 2
Male - UNKNOWN
VOICE PRINT COMPLETE
CALLER 1: DONNA HAWTHORNE - 97.765%
CALLER 2: UNKNOWN - 11.678%
ATTEMPT VISUAL PURSUIT
FOR CALLER 2?
YES
NO
CALLER 2
UNIDENTIFIED
Mandy Gomez
9811 W. Midway
92802
714 555 4699
Ginger Grant
6331 W. Via Artx
92804
Jack Raquet
Melinda Price
Natalie Lopez

Special 19

Camille Akmut

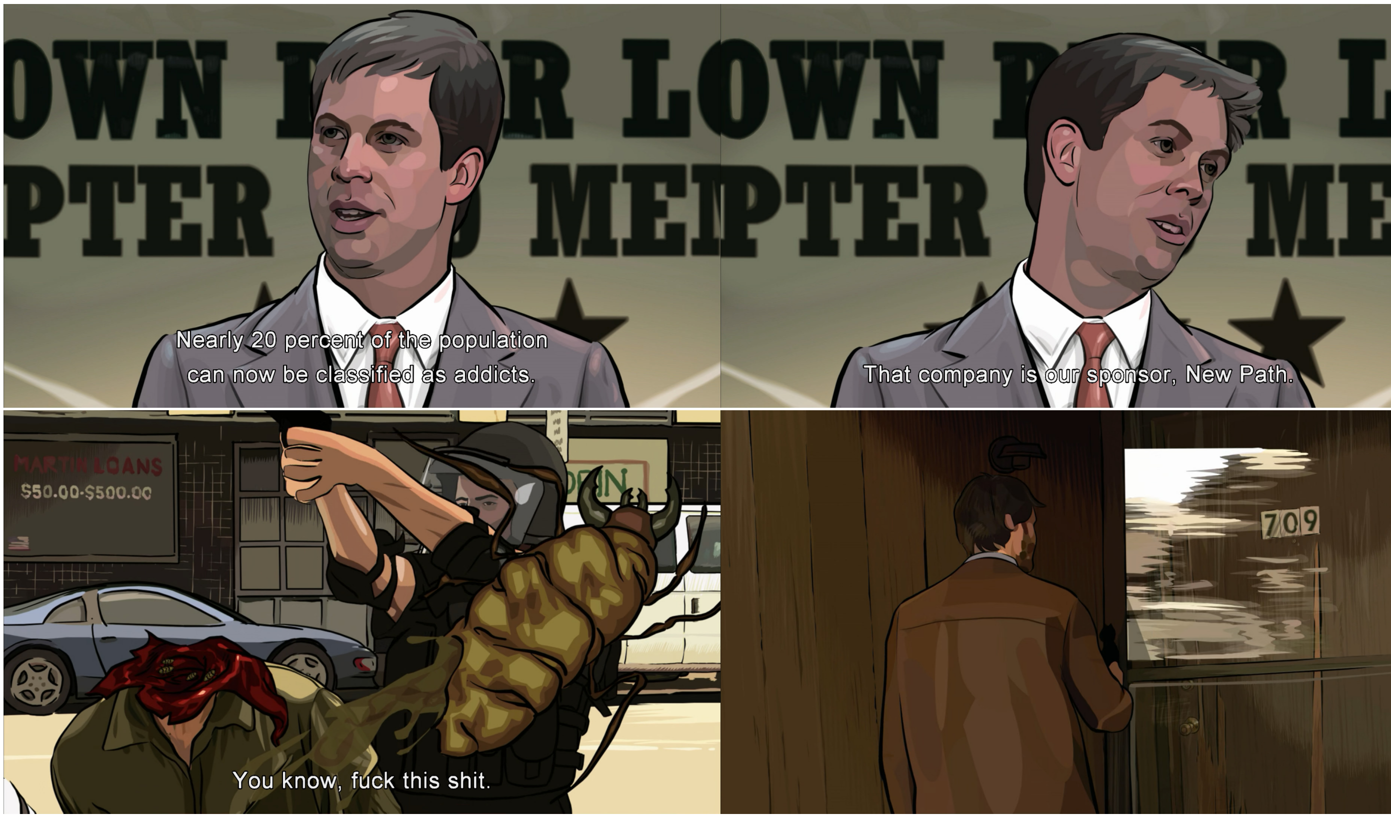
February 29, 2024

The scramble suit technology goes beyond just altering physical appearance, it scrambles many aspects of identity (as its generalist name indicates) : per Lions Club* presentation, “[wearers] once within the scramble suit, cannot be identified by voice, or by even technological voiceprint, or by appearance.”

Its invention is credited to Bell Laboratories.

[*called Brown Bear Lodge in the adaptation]

Police State 2000 (1999), one of Alex Jones’ earliest documentaries, and many sequels, create the arguably most direct link with A Scanner Darkly : with its alarming images of home invasions and talk of “cameras on the street corners”. *Police State II The Takeover* (2000) connected the, theme of the, police state explicitly with the “drug war” (in the studied introduction that is typical for his style).


OWN B R LOWN B R L
PTER O MEPTER ME
Nearly 20 percent of the population can now be classified as addicts.
That company is our sponsor, New Path.
MARTIN LOANS
$50.00-$500.00
You know, fuck this shit.
709

Adding to the list of elements contributing to distortion of perception and reality/hallucination, post-coitus the protagonist suddenly becomes alarmed by the resemblance between Connie and Donna. The frenzy introduction is a fairly faithful adaptation of the original.

“We’re all dreaming” in the novel - the memorable answer given by Arctor in response to Donna’s confusion about plans of selling the house - is directly followed by the lines : “*He wondered how much of the insanity of the day–his insanity–had been real, or just induced as a contact lunacy, by* *the situation.*"

Keanu Reeves' presence, in a starring role, in the 2006 film adaptation, coming from the Matrix (whose second and third part were released in 2003), creates a connection with that other science fiction work; in which both reality is questioned. Executive producers were Clooney and Soderbergh [per credits]. Cochrane, playing Freck, had a role in Dazed and Confused.

Keanu Reeves	Fred/Bob Arctor/Bruce
Winona Ryder	Donna Hawthorne/Hank/Audrey
Woody Harrelson	Ernie Luckman
Robert Downey Jr.	James Barris
Rory Cochrane	Charles Freck

BOOKS

— Peter Norvig. 1992. *Paradigms of Artificial Intelligence Programming: Case Studies in Common Lisp.* Kaufmann.

Paradigms, whose title doesn't confer fully the book's content, is half a Lisp manual and introduction to Lisp and half A.I.. Had it been split into two, Paradigms, instead of being a fairly niche - and increasingly of historical interest - artificial intelligence tome would be broadly acknowledged, discussed as a main alternative to SICP.

Part I	Introduction to Common Lisp	pp. 3 f.
Part II	Early AI Programs	pp. 107 f.
Part III	Tools and Techniques	pp. 265 f.
Part IV	Advanced AI Programs	pp. 507 f.
Part V	The Rest of Lisp	pp. 751 f.

Strictly : The Lisp manual inside Paradigms is formed by parts 1, 3 and 5; while 2 and 4 are the AI side.

However this separation is artificial. For multiple reasons : the Lisp parts are there to make understanding of the AI examples easier and, vice versa, the AI parts reinforce knowledge of Lisp.

In addition, historically, developments of AI and Lisp language were connected[1], such that writing an AI book meant - at least up to the early 1990s and times of publication - likely writing a Lisp book.

PAIP is among the last major representatives of this bygone era of artificial intelligence. The landscape and scene was radically reshaped in a slow process that really started with the release of Python (considered a simpler language while having broad applicability), availability of useful and increasingly popular statistics libraries, adoption of Python as the introductory language to programming in the CS curriculum (replacing both Java and Scheme), a process that was further connected to the concomitant creation and enormous rise of the Web, where likewise Python quickly played a much bigger role than Lisps at various startups that became major platforms (Google, Reddit...).[2]

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[1] especially through influence of McCarthy, MIT and its AI Lab.

In a more conventional programming book, part 1 would be - what is traditionally - the first half (i.e. the easier introduction) and parts 3 and 5 the other half (intermediary and advanced).

A highlight, from a historian's point of view maybe the most remarkable feature of Paradigms is part 2 'Early AI Programs'.

Its title, somewhat like the title of the book itself, is misleading in that it is ambiguous : It could have the meaning of beginner AI applications (as echoed by part 4's "advanced" title). But, more importantly it certainly carries the historical sense.

In this part, Norvig goes through a number of historically significant programs from the early period of AI. By the table of contents alone, readers familiar with the history of the field will have already recognized programs like ELIZA.

> "[In addition to GPS program we] will examine three more well-known AI programs of the 1960s. ELIZA held a conversation with the user in which it simulated a psychotherapist. STUDENT solved word problems of the kind found in high school algebra books, and MACSYMA solved a variety of symbolic mathematical problems, including differential and integral calculus. We will develop versions of the first two programs that duplicate most of the essential features, but for the third we will implement only a tiny fraction of the original program's capabilities. All three programs make heavy use of a technique called pattern matching. Part I serves to show the versatility—and also the limitations—of this technique."[3]

First of the famous AI programs examined was the General Problem Solver (or GPS), described in ch. 4,

> "The General Problem Solver, developed in 1957 by Alan Newell and Herbert Simon, embodied a grandiose vision: a single computer program that could solve *any* problem, given a suitable description of the problem."

The book's historical notes, of which it is full, never cease to be interesting, covering many aspects of pre-current AI. Remarks about GPS' legacy serve as a further example,

> "The following quote from Drew McDermott's article "Artificial Intelligence Meets Natural Stupidity" sums up the current feeling about GPS. ... *Remember GPS? By now, "GPS" is a colorless term denoting a particularly stupid program to solve puzzles. But it originally meant "General Problem Solver," which caused everybody a lot of needless excitement and distraction.* ... Nonetheless, GPS has been a useful vehicle for exploring

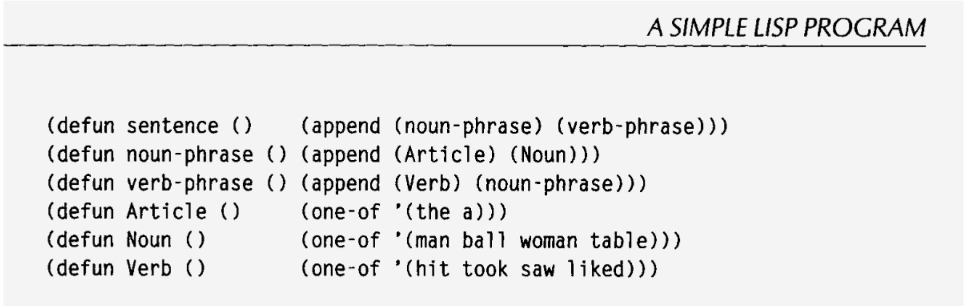
---

[2] To give specifics : the release of Python 1.0 (1994) and the in-between period leading to release of 2.0 (2000), and C implementation CPython (1994); on the library side, the release of NumPy's predecessor (1995) to facilitate matrix operations, which are heavily used in AI; Reddit's rewrite from Lisp to Python, and as for Google e.g. involvement, either through funding or individual personnel, in Python projects (such as optimization project Unladen Swallow).

[3] c. 5 intro.

> programming in general, and AI programming in particular. More importantly, it has been a useful vehicle for exploring ”the nature of deliberation.”” [p. 147]

An example of a basic program is the grammar, generative of a simple English phrase, at the beginning of chapter 2,



A SIMPLE LISP PROGRAM

```
(defun sentence ()    (append (noun-phrase) (verb-phrase)))
(defun noun-phrase () (append (Article) (Noun)))
(defun verb-phrase () (append (Verb) (noun-phrase)))
(defun Article ()     (one-of '(the a)))
(defun Noun ()        (one-of '(man ball woman table)))
(defun Verb ()        (one-of '(hit took saw liked)))
```

whose example execution or hand calculation would look something like this,

```
defun sentence ()
= (append (noun-phrase) (verb-phrase))
= (append (append (Article) (Noun)) (append (Verb) (noun-phrase)) )
= (append (append (THE) (MAN)) (append (Verb) (noun-phrase)) )
= (append (THE MAN) (append (HIT) (append (A) (BALL))) )
= (append (THE MAN) (append (HIT) (A BALL)) )
= (append (THE MAN) (HIT A BALL) )
= (THE MAN HIT A BALL)
```

Examples of more complex, interesting programs are :

- Ch. 5 : ELIZA - the dialogue program of same name.
- Ch. 21 ‘A grammar of English’ (a more comprehensive grammar than found in ch. 2).
- Ch. 22 : a Scheme interpreter

Special 20

Camille Akmut

March 2, 2024

NOTES ON LEIBNIZ

The period from 1672 to 1676, spent in Paris and briefly in London, was key to Leibniz, including in his relations to computer science and technology. He gained access to works of Pascal, Descartes and Spinoza - including in all three cases to unpublished manuscripts - and met Huyghens, one of the leading scientists of the time... This period resulted in the making of the mechanical computer / calculating machine.

According to Hofman, the idea "for a calculating machine equally useful for all four species of computation, the idea of which - so difficult to translate into practice - was already in his mind before he came to Paris."[1]

At least two main implementations or designs of the machine existed : the rough 1672 version and mature 1674 one.

> "At last the calculating machine was completed. A long and thorny road had led from the rough model of 1672 to the proper working instrument of the summer of 1674. Again and again an earlier model had to be altered and improved; the craftsmen lost interest in the troublesome and thankless task and expected a quick reward for their work, and if Leibniz had not found in Olivier a true artist of his trade with his heart in the job, the machine might never have been finished."[2]
>
> and, footnote, providing more details
>
> "The improvements of this version compared with the rough wooden model first shown in London, together with the still remaining faults (which Leibniz never succeeded in eliminating)"

Biography found at the beginning of C. D. Broad's Cambridge lectures from the 1940s is one of the best, compact of Leibniz. About the period in question he writes,

> "Leibniz was in Paris from 1672 to 1676, except for a short visit which he paid to England in 1673. While in Paris he made a careful study of the Cartesian philosophy and of mathematics. He had much conversation with Malebranche on philosophy, and with Huyghens on physics and mechanics. He studied the mathematical works of Pascal, and invented a calculating machine to add, subtract, divide, and multiply.
>
> During his visit to England in 1673 he was made a Fellow of the Royal Society (...)

---

[1] p. 9

[2] beginning c. 7 / p. 79

> In November 1676 Spinoza, who was always very nervous of letting strangers see his unpublished writings, finally allowed Leibniz to meet him at The Hague. Leibniz stayed there for some time, had much talk with Spinoza, and pointed out to Spinoza certain fundamental mistakes in Descartes's mechanics. In return he was allowed to see some parts of the Ethics in manuscript. Later, when Leibniz had completed his own system, he became very critical of Spinozism."

Theodicee appears to be modeled on the Ethics and it is unsurprising to learn that L. had access to it. i.e., in their common project to found a moral based on logic. (despite wider differences)

An overview of Leibniz' interests and contributions to technology is given as follows :

> "The calculating machine was only one of Leibniz's many technological ideas, which included improvements on time-keeping, distance-reckoning, barometry, the design of lenses, carriages, windmills, suction pumps, gearing mechanisms, and many other devices."[3]

About the London stay, specifically as it relates to our interest :

> "on a diplomatic mission to London (...) he made contact with the Royal Society (...). The Society had given a mixed reception to his Theoria motus concreti, but seemed more impressed with his project of a calculating machine; it encouraged him to construct a working model."[4]

Hofman's monograph in the English translation is sub-titled 'Growth to Mathematical Maturity'. Centrality of the period in Leibniz' life is further described in the Cambridge Companions series :

"When in Paris from 1672 to 1676, Leibniz made his entrance into the learned world and did his best to seek out intellectual luminaries, such as Arnauld and Malebranche, who made Paris an important center of learning. He managed to gain access to the unpublished manuscripts of Pascal and Descartes. (In fact, some of Descartes' papers have survived only through the copies Leibniz made of them.) Most importantly, he came to know Christiaan Huygens, under whose tutelage Leibniz was introduced to the Moderns. He quickly progressed, and in those years he laid the foundations for his calculus, his physics, and the central core of what was to become his philosophy."

[Antoine Arnauld (1612-94) is meant]

---

[3] (Cambridge companion, p. 26)

[4] ibid.

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Ref.

– J. E. Hofman. 1949. *Die Entwicklungsgeschichte der Leibnizschen Mathematik während des Aufenthalts in Paris (1672-1676).* Oldenburg.

[lit. trans. The history of the development of Leibnizian mathematics during the stay in Paris...]

En. trans. : 1974. *Leibniz in Paris 1672-1676.* Cambridge University Press.

– C. D. Broad. 1975. *Leibniz. An Introduction.* Cambridge University Press.

– The Cambridge Companion to Leibniz.

NEWS

While (editors at) leading newspapers missed the historical character of the 2024 Moon landing and emphasized its national dimension — "*A U.S.-Built Spacecraft Lands on the Moon for the First Time Since 1972*" per the New York Times[1] and "*US returns to lunar surface for first time in over 50 years*" in the Guardian's case — a few publications attributed the significance of the event, correctly in our view, to its economic nature as a landmark achieved by a private company.

Among the latter, *Houston Chronicle* put it, of all perhaps, in the most succinct, direct and evident way ("Houston's Intuitive Machines makes history as first private company to touch down on the moon"). Non-mainstream *Jacobin*, the next day, relayed the news from the same perspective but in more aggressive form : "Get These Rich People Off the Moon".

Among the news agencies, Reuters sided with the nationalistic interpretation and view ("Moon landing: US clinches first touchdown in 50 years") while the AP adroitly combined both dimensions ("Private lander makes first US moon landing in more than 50 years"), achieving maybe the best balance.

NASA staff celebrated the happening, which according to calculations would have cost up to 1 Billion in the NASA framework and old way of doing things, instead of 'only' 100 Million, and looked forward to more of these public-private partnerships... Certainly, a new era of space exploration has begun.

— "A U.S.-Built Spacecraft Lands on the Moon for the First Time Since 1972" *NYT*, Feb. 22 2024.

> ""I think it is a smart thing that NASA is trying to do," said Carissa Christensen, chief executive of BryceTech, a space consulting firm, "which is to essentially create a competitive ecosystem of providers to meet its needs."
>
> Intuitive Machines is one of several small companies that NASA has hired to transport instruments that will perform reconnaissance on the moon's surface ahead of the return of NASA astronauts there, planned for later this decade.
>
> For this mission, NASA paid Intuitive Machines $118 million under a program known as Commercial Lunar Payload Services, or CLPS (...)
>
> In the past, NASA would have built its own spacecraft. (...)

---

[1] In the case of the NYT, the headline chosen was off as it did not reflect the content, where a science writer had given a fine analysis especially of economic aspects.

> But when NASA designs and operates spacecraft itself, it generally seeks to maximize the odds of success, and its designs tend to be expensive.
>
> The Apollo moon landings from 1969 to 1972 became a paradigm for a colossal program that tackled a problem nearly impossible to solve with a near-limitless budget - the proverbial moonshot - while CLPS seeks to harness the enthusiasm and ingenuity of start-up entrepreneurs.
>
> Thomas Zurbuchen, a former top NASA science official who started the CLPS program in 2018, estimated that a robotic lunar lander designed, built and operated in the traditional NASA manner would cost $500 million to $1 billion, or at least five times as much the space agency paid Intuitive Machines.
>
> NASA hopes that capitalism and competition - with companies proposing different approaches - will spur innovation and lead to new capabilities at lower costs.
>
> But even if they succeed, these companies face uncertain business prospects attracting many customers beyond NASA and other space agencies.
>
> “It’s not obvious who those other customers might be,” Ms. Christensen said.
>
> Intuitive Machines has contracts for two more CLPS missions, and other companies are expected to take their shots at the moon, too. Astrobotic Technology, the Pittsburgh-based company, has a second mission in preparation to take a robotic NASA rover to one of the shadowed regions where there might be ice. Firefly Aerospace, near Austin, Texas, has its Blue Ghost lander mostly ready but has not yet announced a launch date.”

— “Odysseus Moon Lander Heads Into a Cold Lunar Slumber” *NYT*, Feb. 28 2024.

> “Last week, Odysseus, a privately built robotic lunar lander, became the first American spacecraft to set down on the moon in more than 50 years, and the first nongovernmental effort ever to accomplish that feat.”

— “Houston’s Intuitive Machines makes history as first private company to touch down on the moon” *Houston Chronicle*, Feb. 22 2024.

> “There was a hiccup shortly after liftoff, with the lander experiencing a navigation issue[intuitivemachines.com/_files/ugd/7c27f7_6f08ded687bb4950bff004e566d8e2f0.pdf], but a software patch solved the problem.”

It could be argued, on the other hand, that Houston Chronicle reporting merely replaced the national point of view and pride with the local or city one...

February 28 reporting of the New York Times, looking back at the events a week later, provided details for many failures and fixes, and - connected - software :

> “The spacecraft encountered a series of near-calamitous challenges, almost lost its way, then landed crookedly. (...)
>
> Despite everything that did not work quite right, Steve Altemus, the chief executive of Intuitive Machines, still called the mission “an unqualified success.” (...)
>
> Originally, the mission was to last nine or 10 days, until night fell on the solar-powered spacecraft. But with Odysseus tilted at an angle, its solar panels were not in the ideal orientation to collect sunlight and generate power. (...)
>
> On Wednesday, the story of how Odysseus got to the ground without crashing into pieces became even more incredible.
>
> Intuitive Machines had already disclosed that the laser instrument on Odysseus for measuring its altitude during descent was not working. Safety mechanisms to prevent the lasers from firing accidentally on Earth had never been removed.
>
> In the hours before landing, engineers hurriedly rewrote guidance software on Odysseus to use altitude readings from a more advanced but still experimental laser device that NASA was testing on this flight.
>
> But the programmers overlooked one spot in the software that needed to be updated, and the spacecraft’s computer ignored the altitude data. Thus, during the landing descent, Odysseus did not know precisely how high above the moon’s surface it was. However, it was able to make guesses of its altitude based on its horizontal speed calculated from camera images and measurements of accelerations in the spacecraft’s velocity.
>
> “It’s the first time anybody’s flown this algorithm, and it exceeded expectations, because we lived to tell about it,” Mr. Altemus said.
>
> Last Thursday, it was not immediately evident that Odysseus had arrived in working order.”

If a mission was planned to run for 10 days, and could only collect data just for 1, then it could not be considered a success, and even from the short economic perspective - let alone, more important, scientific - simple math would have it was not a better deal, and possibly much worse. [1d=120M, 10d=500M-1B] Additionally, experience and knowledge gained is lost - in part at least - to the public and privatized inside the closed entities of companies, benefiting private interests, to serve profit-making and creating the basis for further, future, contracts (already in place per one of the articles); creating dependencies on privatized know-how and a vicious circle of public-to-private transfers; more transfers justifying more transfers, since the ”traditional” public institutions don’t in fact have the expertise any longer, as a logical consequence of having been depleted of it. All the while being publicly funded. A university contract could have led to same or better results, but with more guarantee in place of not depriving the commons. Or, a public institution (for which, theoretically, NASA of course should have been suited, and was “the traditional NASA manner”, mentioned).

CLPS may be regarded as a turning point, even though an entire aerospace industry has existed for a long time (creating military and scientific applications as part of a large industrial-governmental complex).

The privatization of public sectors, especially in the more recent variant of technology companies has had mostly disastrous effects (transportation, Uber and gig work; housing, Airbnb and gentrification; gig workers in food delivery and ”cloud” kitchens...). As for space exploration, the cheap solution provided by the private sector may have turned out barely-fine this time. After all : No lasers were ”accidentally” fired on Earth, and no astronauts lost as this was an unmanned mission. No spot ”overlooked” by the engineers in the software had mass effects. For now...

Special 21

Camille Akmut

March 18, 2024

(Technology and sexuality.)

MAGAZINES — *Future Sex*

Il. first issue and #4, the Gibson issue

future
X
sex
Asian Beauty
Premiere Issue
Cutting Edge Erotica
Electronic Masturbation
Coming on Company Time
Cyborg Love Slaves
3D Digital Orgasms: Virtual Reality Sex
New World Order In Adult Video
$4.95 / Canada $5.95
FUTURE
Sex
ISSUE ▸ 4
WILLIAM GIBSON
BRAIN TUNERS
WETWARE DREAMS
LOVE IN THE L.A. RIOTS
COMIX BY GILBERT HERNANDEZ
$4.95 / CANADA $5.95

Future Sex was a quarterly, based in San Francisco. The first issue is dated 1992; The seventh "July-September 1994".[1] Abbreviated FS.[2] Readers were called Futuresexarians.[3]

Future Sex' influences can probably be listed as follows : Mondo 2000 (and its predecessors), the Whole Earth Review and Wired.[4] Contributors to these influential magazines that crossed over to FS include R.U. Sirius, Jude Milhon, Mike Godwin... While the aforementioned magazines covered the social aspects of technology, and did mix tech and sex to some degree, Future Sex pushed this

---

[1] This information is based on the copyright section, usually located after the table of contents page (below listing of staff).

[2] The FS abbreviation is found throughout the magazine (punctuating and signaling the end of articles), but see e.g. p. 63 in issue 7.

[3] at least in one reader letter of issue 7 (p. 4).

[4] Formally, the influence is most visible in aspects of the magazine such as the table of content (designed in the fashion typical of Mondo 2000 / early Wired).

issue 1	Lisa Palac editorial	p. 3 (“Crystal Ball Persuasion”)
	VR sex	p. 6 (“Pleasure by the Numbers”)
	St. Jude Milhon	p. 57 (“The Woman’s Home Companion”)
issue 2	Erotic software, Mike Saenz interview	pp. 22-27 (“The Sugar Daddy of Sexware”)
	Nixpix BBS	pp. 40-43 (“Getting it On-Line”)
issue 3	Introduction to Japanese pornography	pp. 28 f. (“Porn in the Land of the Rising Sun”)
issue 4	Gibson interview	pp. 21-25 (“Test-Dicking The Force-Feedback Vagina”)
	PGP article	pp. 8-9 (“Private Parts”)
issue 5	trans portrait	pp. 10-11 (“From Dyke to Dude”)
	adult newsgroup	p. 13 (alt.sex)
	R.U. Sirius interview	pp. 22-25 (“Porno 2000”)
	BBS reviews incl. The WELL	p. 55 (Reviews section)
	Tetsuo: The Iron Man review	p. 57 (Reviews section)
	Nan Goldin’s *The Other Side* review	p. 60 (Reviews section)
issue 6	editor biography	(“The Cardboard Casanova”)
issue 7	BBS gender swap tale	pp. 10-11 (“Crossing the Net”)
	R.U. Sirius essay	pp. 30-31 (“Death of a Groupie”)
	heterosexuality as a fetish	pp. 38-41 (“Fall From Grace”)
	BBS reviews	p. 55 (Reviews section)

Table 1: *Future Sex* selection

combination the furthest. Lisa Palac was the magazine’s editor.[5]

Future Sex magazine is a typical product of the 1990s, with its almost boundless belief in technology as a source of liberation, or hardcore techno-optimism, on one hand; and its implicit of sexual liberation either as prelude or precondition for economic liberation (including adaptations, and emptying, of revolutionary slogans e.g. “Viva la pussy” and similar, frivolous in part, treatment of worker rights themes e.g. “Coming on company time”).

There is something underwhelming about this magazine, if only in retrospect, whose depictions of “future sex” never went far beyond the average straight sex[6], displaying a staggering lack of imagination; ending in depictions of futuristic intercourse, promised but not quite delivered, that looked about like any soft pornographic magazine of the 1990s - without the unpretentious charm, replaced instead by various neologisms formed primarily by the particle cyber, applied to sexual domains (“Cybersex”, “Cyber slut”, “cyborg love slaves”[7], “wild cyber cunts”[8] etc. etc.) and hip talk of the “international technosexual data fetish info zone”[9]...

---

[5] cf. listing of staff.

[6] Notable exceptions are, for example, the Lesbian series “Lush” as part of the photography section in issue 7, and multiple photographs in the second. Male homosexuality was absent or barely represented. (While lesbians can be sold to a male heterosexual audience as ‘2 x more women’, gay men are a harder sale.)

[7] #1, cover.

[8] #7, p. 2.

Instead the magazine was filled with analyses that ranged from insightful essays (the VR piece in issue 1) and regularly interesting thoughts on the possible and plausible modifications of human sexuality brought on by computer technology (Lisa Palac’s opening editorial at the beginning of the first issue) to - in Mondo fashion - fringe and dubious science (discussion/promotion of “lucid dreaming”, for example[10]).

As a pornographic magazine which contained technical articles on PGP and interviews with the likes of Gibson it remains either unique or a stand out publication (obviously influenced by Mondo’s early mix of technological subjects with sex and drugs).

Heterosexuality, of all sexualities, is the one least evocative of any futuristic vision - yet was the most represented in the imagery. Content however did give a large place to the discussion, often interesting, of sex and gender including gay and transgender topics. It is likely that the editor’s own orientation (described ”boy-crazy”[11]) combined with a certain open-mindedness and curiosity resulted in that strange end result. Palac’s popularity may be attributed to her identity or public presentation as a woman open about having a high sex drive - which seems to be a recurring theme with female ‘sex experts’ (not unreasonably).

Fully immersed in the (idealist or naive) techno-optimist ideology, was one writer, author of an early substantial piece in the inaugural issue :

> "(...) it's one of the infinite possibilities that will be available to us with the advent
> of a new technology known as virtual reality.
> Virtual reality (VR) is a three-dimensional environment generated by a computer. (...)
>
> advantages of VR sex are many. It's the ultimate in safe sex: no HIV virus and no reason
> to be shy about trying out a new fetish. Making it with someone of the same sex, fisting,
> golden showers, S/M - all will be available safely and with any degree of
> anonymity (or exposure!) you want." [issue 1, p. 7]

Today not many people would enter virtual reality spaces with great expectations of anonymity, and the physical world is increasingly returning - after the euphoria of the 1990s and 2000s, especially pushed by the creation of the Web - to being a place of arguably greater anonymity or privacy than any networked interactions... similar to urban spaces returning to wild states in contexts of abandonment.

---

[9] name of a recurring category in Future Sex.

[10] ibid.

[11] “The Cardboard Casanova. When a hard man is hard to find” in issue 6 provides some biographical elements about the editor.

In her editorial, Lisa Palac herself admitted : “*The technology hasn’t arrived yet, but the future is tomorrow.*”

A highlight of the first issue : Jude Milhon wrote a short science fiction story, in which she imagines a life with a pleasure robot/android. “The Woman’s Home Companion”. It begins with the line “I’m sloshing in the Jacuzzi” and continues with the assistant servicing her...

Fiction

THE WOMAN'S HOME COMPANION

by St. Jude M

I'm sloshing in the Jacuzzi, still waking up.

Another little mechanical fanfare: a finger circles r

`Last night when I turned my first Personal Robot on, fresh from the factory, I issued the First Commandment: call me Mistress every time you address me . (...)`
`it - well, he - is himself retro, cyberpunk style, all black rubber and chrome, mirrorshades on his slickskin head.`

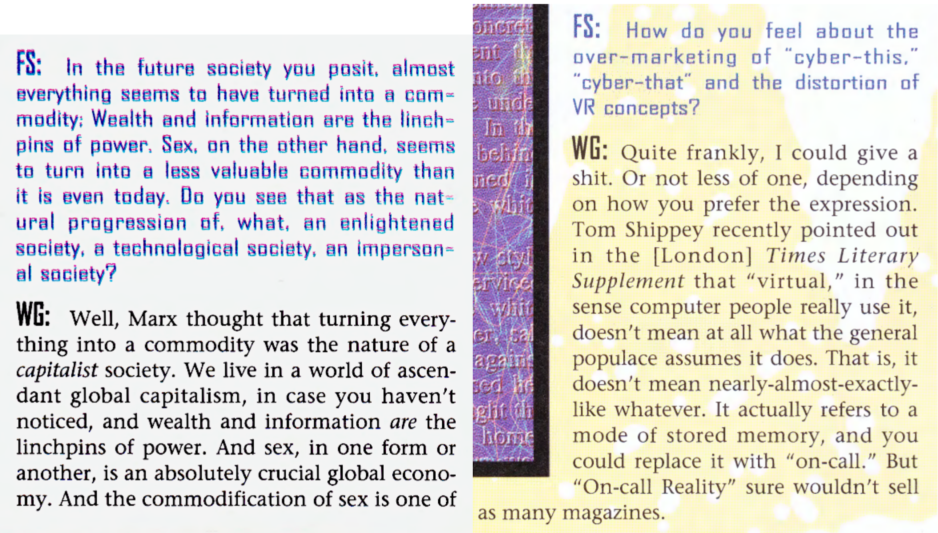
In #2, the guest interviewed for the issue was Mike Saenz - “The Sugar Daddy of Sexware”, per the title - who apparently made significant contributions to erotic software. An extract from the presentation :

> *Back in the go-go eighties, Saenz designed MacPlaymate, the first erotic software for the Macintosh. In this bit of onscreen naughtiness, you could click and disrobe Maxie MacPlaymate, make her moan, groan or satisfy herself with a variety of sex toys. All this fooling around, however, came to a grinding when Playboy issued a Cease and Desist over trademark infringement. Not to be stopped by some rake in a smoking jacket, Reactor released Virtual Valerie, the first X-rated interactive CD ROM game.*

As a side note : erotic software is an entire subgenre whose history remains largely poorly understood and understudied, presumably due to assumptions about being a lesser cultural or art form.

A portrait of the adult BBS called NixPix could be found in issue 2. “Nixpix has more than 10,000 subscribers, making it one of the largest sex clubs in the country.” Its owner : “Nick is one of the pioneers and international champions of hardcore computer porn.”

Issue 4, containing the Gibson interview, was arguably the height of the magazine. In his discussion with Future Sex, Gibson discussed a variety of topics including Marx, capitalism and linguistics, among others. And, the magazine’s obsession (VR sex).



FS: In the future society you posit, almost everything seems to have turned into a commodity: Wealth and information are the linchpins of power. Sex, on the other hand, seems to turn into a less valuable commodity than it is even today. Do you see that as the natural progression of, what, an enlightened society, a technological society, an impersonal society?

WG: Well, Marx thought that turning everything into a commodity was the nature of a *capitalist* society. We live in a world of ascendant global capitalism, in case you haven’t noticed, and wealth and information *are* the linchpins of power. And sex, in one form or another, is an absolutely crucial global economy. And the commodification of sex is one of

FS: How do you feel about the over-marketing of “cyber-this,” “cyber-that” and the distortion of VR concepts?

WG: Quite frankly, I could give a shit. Or not less of one, depending on how you prefer the expression. Tom Shippey recently pointed out in the [London] *Times Literary Supplement* that “virtual,” in the sense computer people really use it, doesn’t mean at all what the general populace assumes it does. That is, it doesn’t mean nearly-almost-exactly-like whatever. It actually refers to a mode of stored memory, and you could replace it with “on-call.” But “On-call Reality” sure wouldn’t sell as many magazines.

Gibson’s feelings about the prefix cyber in Future Sex echo the ones found, in different or more elaborate form, in interviews he gave for documentary *No Maps for These Territories* (he remarked that electro, after an initial craze, was barely used anymore and that the over-use of cyber seemed to point in the same direction).

Further sign of the magazine’s growing recognition or established reputation was the interview of R.U. Sirius in issue 5, titled ‘Porno 2000: The Criminal Sexuality of R.U. Sirius’. Its summary given as : “Evil fantasies, world domination and psychedelic confessions from the co-founder of Mondo 2000.”

In the BBS reviews of issue 5, The Well was reviewed.

“From Dyke to Dude”, one of multiple coverage of trans topic found in the magazine, was briefly described : “How does a gay girl transform herself into a straight boy?”

Issue 7 was a special “music issue”, around primarily rock and roll and its notoriously queer history (as amply reflected in the “Sex In Music Timeline”[12]).

“Crossing the Net”, sub-title “Gender Swapping On-Line”, in issue 7 was a BBS tale that ended with the line,

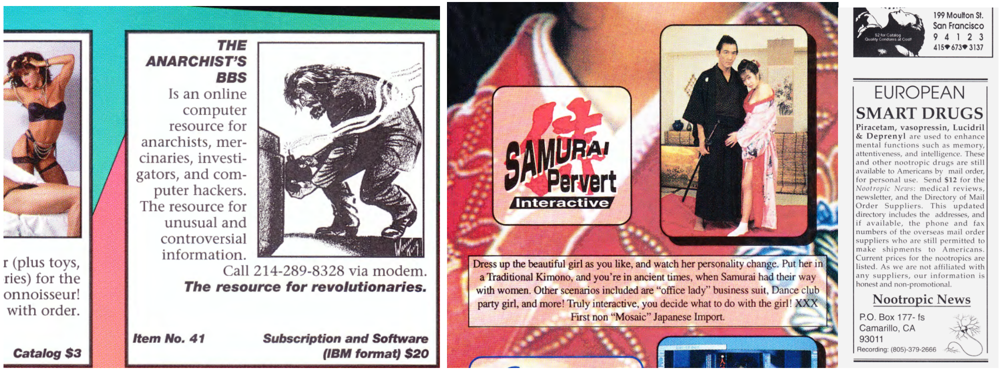
> *... even though I don’t plan to play a woman again anytime soon, I was gratified in my own way. The women online had congratulated me for finding such a good man to have public sex with. Or, at least, I think they were women. And I think he was a man.*

Issue 7 contained a story wherein, in the future heterosexuality is a fetish... The narrator - a history major - speaks at an advanced point in time, after an event called ‘the Great Cleansing’, in a context where human males have disappeared and heterosexual relationships and acts can only be viewed in artifacts (e.g., “an early 21st-century bedroom” projected scene). This science fiction story contains a notable technological device, called “eyephones” (through which one can experience visuals of historical documents).

The narrator recalls their awakening story as a heterosexual woman in a world antagonistic to their identity. An early memory is visiting the zoo as a 10 year old with “both my mothers and one of my greatmothers” and the discovery of a male primate. As was historically the case for various minority groups, their sexuality leads them to enter a marginal existence, in a major urban center (“I took a small, cheap single room ... in a run-down neighborhood of Manhattan near the Central Park homeless encampment.”)

The final issue, 7, featured a science fiction story where heterosexuality is a fetish or a minority practice, inverting the current order of things (a reversed gay coming out) — not only, but in imagery also marked a certain departure from past issues with a Lesbian three-some...

Otherwise the magazine is full of advertisement, forming a rich material of primary sources for erotic software, online services and other underground offerings, which a clever historian would know how to make good use of...



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Camarillo, CA
93011
Recording: (805)-379-2666

Il. [left] a submissive male next to advertisement for an “anarchist” BBS

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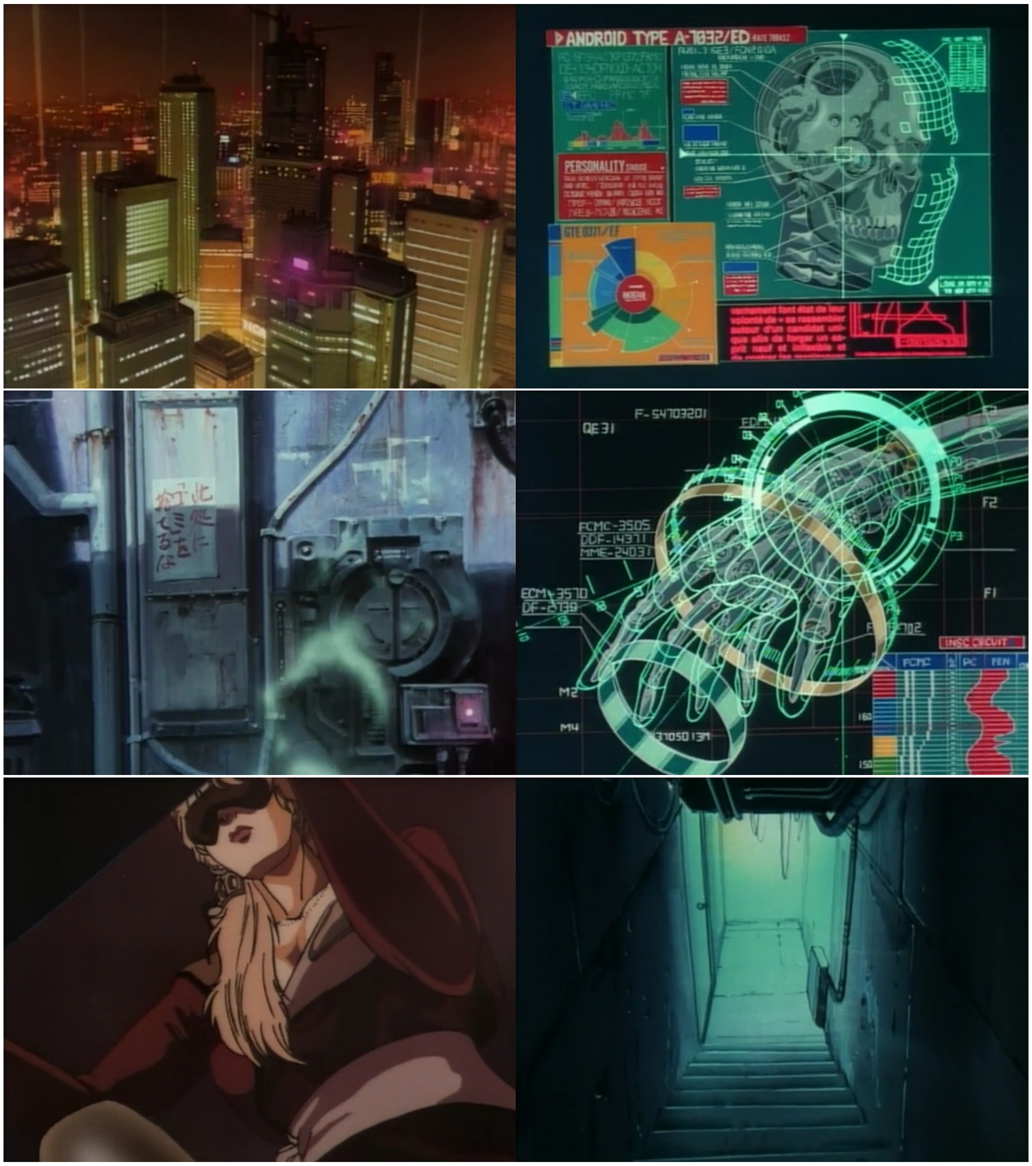
[12] pp. 30-31.

FILM

— “The Phantom Woman” (*A.D. Police Files*)


ANDROID TYPE A-7032/ED
PERSONALITY
GTE 0071/EF
此処に
F-54703201
QE31
FCMC-3505
DDF-14371
MME-24037
ECM-3570
DF-2739
F2
P3
F1
INSC CIRCUIT
FCMC
PC
FEN
M2
M4

‘Boomers’ are defined here as follows :
“*Boomers are artificial humans, made up of proteins, artificial intelligence,*

and artificial organs".

Once more the figure of the android prostitute is used to illustrate the theme of the deviant / deviating android : their deviation from normal or expected behavior, or malfunction, is explained by bugs introduced in circuity or software during sex (regular androids, manufactured for other jobs, are recycled and equipped with sex parts).

In the Bubble Gum Crisis universe the story of "The Phantom Woman" serves the purpose of narrating the transition of Leon from the normal police to the specialized android police - of which he is a part by the time of the events of the main series... and, thus, fulfills the function of prequel and origin story. In the main series he becomes a prominent member of the AD police while here he can still be seen during his beginnings, as a rookie.

The inefficacy of the "normal police" against boomers is introduced (their methods and weapons, meant for humans, are useless) and, hence, motivation for the so-called A.D. Police.

The Phantom Woman is a classic cyberpunk tale, set in the underground of prostitution, illegal android modifications and back-alley aftermarket shops, neonazi or skinhead and biker clubs, in the always rainy Mega Tokyo, ending with the Gibson-ish, *Neuromancer*-era cheesy line, by the protagonist : "I was thinking things like maybe boomers ... were better suited than humans for this crazy town."

Power dad rock soundtrack and all included (by Lou Bonnevie).

A hacker - portrayed as a chubby otaku - is part of the events; their hack base is located, unusually, beneath a Shinto[?] temple.

Overall, there are many parallels and common elements between "The Phantom Woman" - the first story of *A.D. Police Files* - and the other Bubble Gum side-story *Parasite Dolls.* A particularly efficient device, narrative tool used in both are the introduction of androids whose advancement and existence disrupts the border between human and robot, causing societal upset.

The story is that of an advanced android (A-Class) haunted by the masochist memory of their own death, extent even after destruction and recycling.

In that way, there is a continuity between the French left-bank filmmakers of the 1960s who had made memory a central theme of their work (from the deja vus of Last Year in Marienbad and Hiroshima Mon Amour, to striking opening monologue of La Jetee, to public and private memory of the Holocaust documentary Night and Fog) and the cyberpunk authors and directors of the 1980s and 1990s who inherited this theme, re-took it and adapted it to the fertile ground of new, computer technologies; updating it to the promising setting of a half-machine, half-human future.

Special 22

Camille Akmut

March 24, 2024

[additions to the previous volume]

The Phantom Woman is set in 2027 A.D. and thus will soon be part of the past future. The most prominent past fictional future approaching is Ghost in the Shell's, which will be reached in the next 5 years. ("People love machines in 2029 A.D.")

Gibson's comparative discussion of electro and cyber, alluded to, is as follows

> *Cyberspace, one day, might be the last usage of the prefix cyber, because cyber is, I think, going to go the way of electro. We don't use the prefix "electro" in pop cultural parlance much anymore, electricity, being taken for granted that most things are electrical. And, I think that at this point it could be taken for granted that most things are computerized.*

[1h]
No maps for these territories

The location of San Francisco merits a brief, non-original commentary : SF being especially well suited for a publication like Future Sex, as a technology center, city of queers, and progressives... At least historically this was true. The queer bit falls short in the imagery, but many texts included covered non-heterosexual themes or transgender topics.

NEWS

— "Lyft and Uber to cease operations in Minneapolis after new minimum wage law" *CNN*, March 15.

> Lyft and Uber will stop offering services in Minneapolis on May 1 after the city council overrode the mayor's veto of a minimum wage for rideshare drivers.
>
> The city council on Thursday voted 10-3 in favor of the override, allowing rideshare drivers to be paid the local minimum wage of $15.57 an hour.
>
> Lyft said in a statement the bill was "deeply flawed" and that the ordinance makes its "operations unsustainable."
>
> "We support a minimum earning standard for drivers, but it should be done in an honest way that keeps the service affordable for riders," said a Lyft spokesperson.

> Uber said in a statement obtained by CNN that it's "disappointed the council chose to ignore the data and kick Uber out of the Twin Cities, putting 10,000 people out of work and leaving many stranded."
>
> **Mayor Jacob Frey, a Democrat,** said he supports a minimum wage for rideshare drivers but **opposed the ordinance** because it didn't factor in a Minnesota state study that analyzed how much drivers should be paid. **"Everyone wants to see Uber and Lyft drivers get paid more. But** getting a raise doesn't do a whole lot of good if you lose your job," Frey said, according to CNN affiliate WCCO-TV. "There will be a massive impact felt by our region."
>
> The ordinance mandates rideshare drivers make at least $1.40 per mile and $0.51 per minute within Minneapolis. However, the analysis Frey referred to showed lower numbers — $0.89 per mile and $0.49 per minute — to make minimum wage.
>
> **"We shouldn't be afraid of data, we should be embracing it.** We shouldn't be ignoring studies that come out, **we should be utilizing them and creating the best possible policy**," Frey told WCCO-TV. (...)
>
> **Last year, Minnesota Gov. Tim Walz, a Democrat, also vetoed a bill that would have set a minimum wage for rideshare drivers, saying it would make Minnesota "one of the most expensive states in the country for rideshare."**
>
> **Lyft previously told CNN that the bill would be detrimental to drivers, who would ultimately earn less, "because prices could double and only the most wealthy could still afford a ride."**
>
> In 2020, California passed Proposition 22, which was backed by more than $200 million from the most influential gig economy companies. The controversial ballot measure allows Uber and Lyft to treat drivers as independent contractors rather than employees. While it was a major win for Uber and Lyft, it did include a minimum earnings guarantee (excluding the time a driver spends waiting for a gig).
>
> Last June, New York City announced a new minimum pay rate for food app delivery workers amid the rise in the use of services like Uber Eats and DoorDash since the pandemic. **Uber and other food delivery apps sued the city in July, maintaining that the law would hurt delivery workers more than help them.**

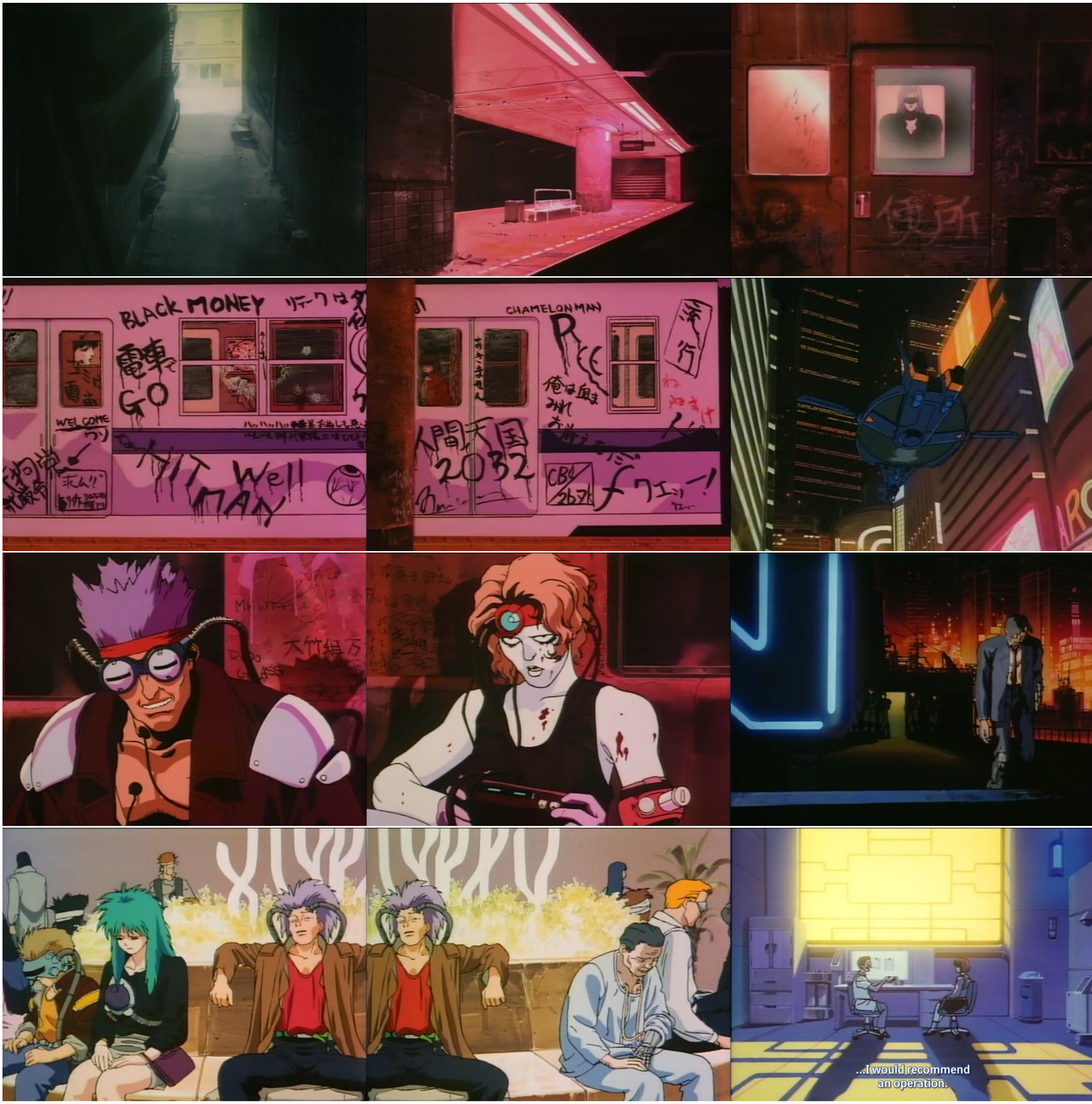
Another illustration for the fact that differences between established parties - in the United States and elsewhere - are largely in the cultural domain, while there is a deep consensus on capitalism, as the end-of-all economic systems (as improbable as that idea is). The issue of ownership and specifically private ownership, the central question brought up by Marxists and communists, is never asked, never questioned, never up for debate... thus, also never answered.

Jacob Frey – a poodle and loyal servant of the bourgeoisie, betrayer of the people – has so deeply integrated the values of the owning class, and its increasingly dominant tech fraction, that he speaks their pretentious language of "data-driven policy" and technocratic drivel indistinguishably from them now.

That politicians should, as public emissaries, play some counter-balancing role to private, for-profit interests is completely lost on his Democratic colleague Tim Waltz as well.

In the great circus and insanity of democracy under capitalism, only, could companies like Uber and their representatives feel empowered to engage in inane reasoning about caring for the welfare of consumers and workers - the very same which they exploit - and have it printed in major media. Their farce going as far as pretending to care for equality, "only the most wealthy could still afford a ride." (The old communist revolutionaries had no qualms about shutting that non sense down, which they recognized, correctly, as a destabilizing force and anti-democratic.)

FILM — “The Ripper” (*A.D. Police Files*)


BLACK MONEY
電車で GO
WELCOME
HIT MAN
Well
CHAMELONMAN
人間天国 2032
CB
...I would recommend
an operation.

[2-4;6-8] Paradise Loop
[3] Ripper
[9] crazy cyborg salaryman
[10-12] the Cybernetics Bank of Tokyo

‘The Ripper’ is another of the Bubble Gum Crisis side stories, set in 2027. In *A.D. Police Files*, each episode, part covers one “police file” or case of the special android police. The second entry of the series continues to be set in the fertile underground of cyberpunk and futuristic urban cities (being Mega Tokyo in the case of Bubble Gum Crisis’ universe).

‘Ripper’ covers a series of crimes in which, again, a “malfunctioning ... AI” or “boomer” is suspected, requiring the intervention of the A.D. Police over the normal police (who, anyway, is not interested “she’s just a street girl”).

`"... the cause may be a malfunctioning imprinted-AI... in other words, the probability is extremely high that this is the work of a Boomer."`

Paradise Loop is a former segment of the old underground train line, abandoned by the general public in favor of newer technology, and re-appropriated by the demi-monde i.e. prostitutes - who are the target of the serial killer - and drug dealers and consumers.

`"a subway loop that was shut down over 10 years ago after the superconductive Metro trains began running. But, even after the line was shut down, for some reason the power remained on, and to this day, several trains still run."`

A naive personnel asks why the A.D. Police is investigating, serving the function of introducing viewers to the rules governing that world

`"Isn't AD Police supposed to be dealing with armed terrorists and Boomers? You know how much damage you cause people when you intervene in ordinary criminal investigations, right?"`

(An early example of damage caused by interventions of the android police, to the general population, is the grotesque arrival of the armored vehicles at the start of part 1.)

The old-fashioned cyberpunk lingo “boomers” leads to comical, appropriately cheesy dialogue, like the early question by one member of the normal police : “*What is this mess? Is this the work of boomies?*”

An important scene, from 10m onward, is the cybernetics clinic.

The clinic, which represents a future state of medicine, serves a double function - and duplicitous one - of health center and organ market place (called the Cybernetics Bank of Tokyo). Incoming patients, even with minor issues are recommended replacement surgeries while extracted, outgoing human organs are sold - as the valuable items that they are - to the wealthy awaiting organ transplants.

In some way, it could be argued that the Cybernetics Bank of Tokyo is the logical conclusion, taken to its utmost ends, of the current medical institution. On one hand infiltrated by commercial interests at a scientific level (e.g. biotech); while practitioners have accommodated themselves to a multi-tier system of modern mass medicine not fully compatible with their oath, a cognitive dissonance of grave consequences.

Illustrative for this advancement of medicine, is the casual conversation between two women, one cheerfully convinced by its merits — fast, said to be without complications, etc. — and fully immersed in the new ideology, the other more reticent but in enough pain to consider it,

- Does it still hurt?
- Just a bit.
- Why don't you go to the Bank? Organ replacement operations don't take more than 5 minutes, you know. [demonstrating] This finger is cybernetic, but you can't tell, can you?
- [signs of reluctance]
- Oh, you're so old-fashioned! You just can't go on being so unhip!

That conversation cuts to a scene involving a crazed salary man, appearing to be a (formerly) human almost completely replaced by machine parts. Based on identification belonging to the aforementioned Bank.

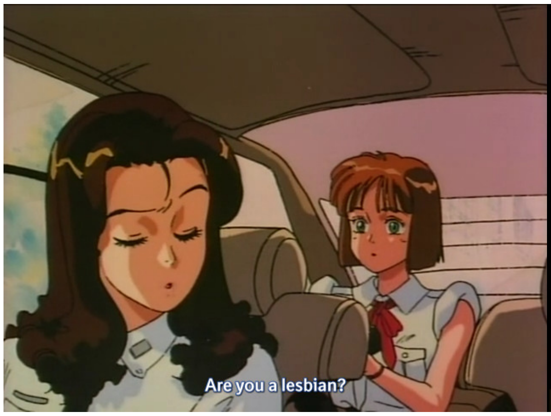
At the Bank itself, Leon warns Iris (the same who had previously complained about minor pain) : "*Even if you replace just a small part of your body you become something other than human!*"

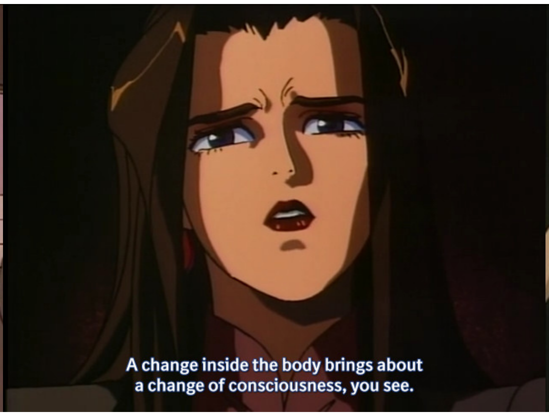
Assurances made by a doctor during a consultation at the clinic reflect the new medicine

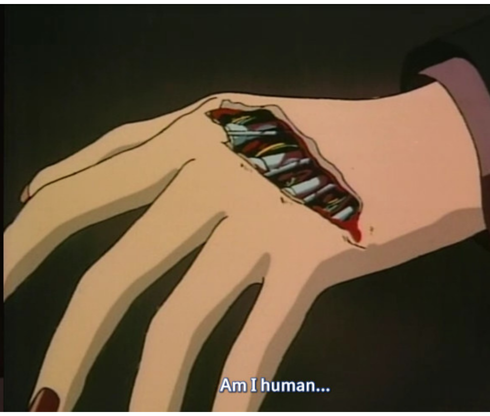
"The pain that you're having may or may not worsen. But, if you feel even the slightest
discomfort I would recommend an operation. [juggling a handful of artificial organs]
This isn't the 20th century anymore..."

These reassuring words, a justification of casual organ replacement, are troubled by a patient's dissatisfaction and loud complaints in the adjacent consultation area. "But... you chose to have the operation... and now you wish to have it undone, and have your real organs back?! They're not malfunctioning, and they have plenty of female functionality..." that patient's physician answers.

In one case artificial eyes are offered, meanwhile the other case implies sexual / reproductive organs.


Are you a lesbian?


A change inside the body brings about
a change of consciousness, you see.



Iris is a member of the normal police, hence can be expected to be an average patient i.e. neither very rich nor poor. Caroline Evers - the suspected ripper - is the president of a corporation. The clinic reflects the new state of medicine, available to the masses, elite included.

The Ripper has notable and strong lesbian themes, extending to sex and gender and issues of transgenderism or transhumanism.

Caroline underwent the willing removal "of all womanly functions" (as a response to misogyny).

"So I completely rid myself of all womanly functions. I had them made cybernetic."

An operation which causes unforeseen and uncontrollable effects. Iris' obsession with Caroline leads to explicit questioning of her sexuality by her colleague : "Are you a lesbian?" [c. 15m] (Notably, no answer is given except for a groaning protest.)

Caroline explains :

> *A change inside the body brings about a change of consciousness*

Interestingly the case has ramifications in law, as a new category of Boomeroid (a boomer close to human) is emerging to describe -formerly judged- humans with modifications affecting over 70% of the body.

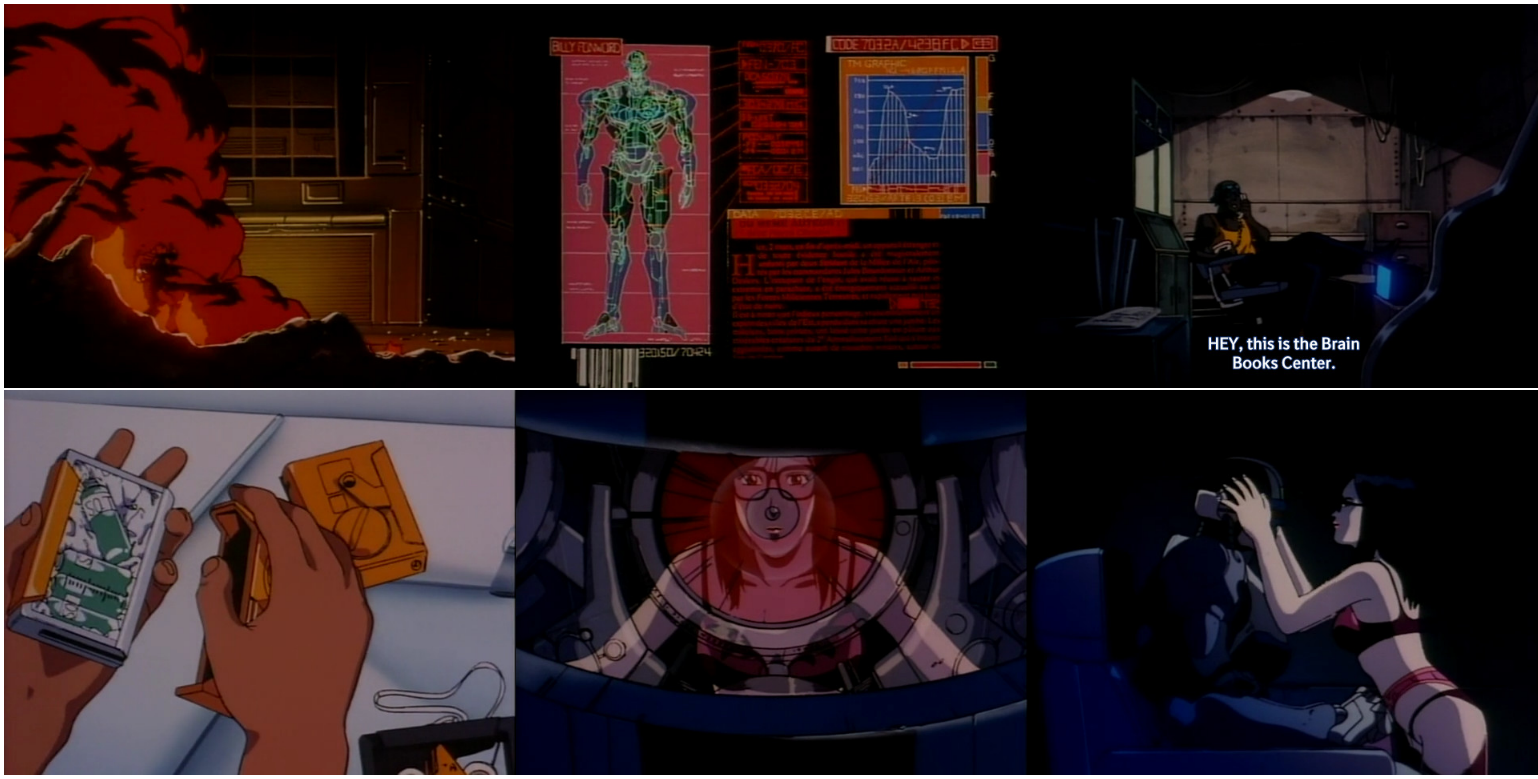
Special 23

Camille Akmut

May 16, 2024

FILM

— *A.D. Police Files* [continued]


HEY, this is the Brain
Books Center.

‘The Man Who Bites His Tongue’ is a title due to the protagonist’s peculiar habit, a last memento of their - lost, at least troubled - humanity : “That pain is the only thing I have that proves I am still human.” per one explanation.

Part 2 dealt with lower bodies replaced, and beyond, providing a case or setting precedent for a legal limit of 70% (dividing humans from the rest).

Part 3 pushes the mechanization of the human body further, and linked philosophical explorations, with the case of someone whose entire body has been mechanized except for the brain and the tongue. In one dialogue the description ”a tank with a human brain” is used [10 m.].

The properly metaphysical preoccupation remains what it means to be human, specifically in the face of great technological disruptions extending to all areas of life including medicine :

The question asked in this final segment — “*What happens to the soul in a mechanical body?*” [circa 9 m.] — is strongly reminiscent of Ghost in the Shell’s background, specifically Major Kusanagi’s own case.

Here it is understood that Billy’s experimental treatment is due to an accident, to be precise heavy damage sustained after an encounter with a boomer.

In this film, the new body adopted or given does not mimic the human one (rather a Robocop-style machine), while in Ghost in the Shell the Major’s exterior appearance is a realistic, female type one, leading to interesting developments about gender and sexuality among others (i.e. the Major’s preference for women, either preserved and continued despite transformation or otherwise emergent afterward). These questions are found, although in different form, again with the appearance of a researcher who has developed a fetish for hybrids; a plausible adaptation / deviation of human sexuality in the human-machine future.

(Additionally, in Ghost in the Shell’s universe, the notion of phantom pain was proposed.)

As in all good science fiction, especially cyberpunk, *The Man Who Bites His Tongue* features its own drug and creation : a stimulant called DA-27. It is sold by such dubious outlets as the ‘Brain Books’, a front store, which hides it inside the emptied shells of audio books, cassettes.

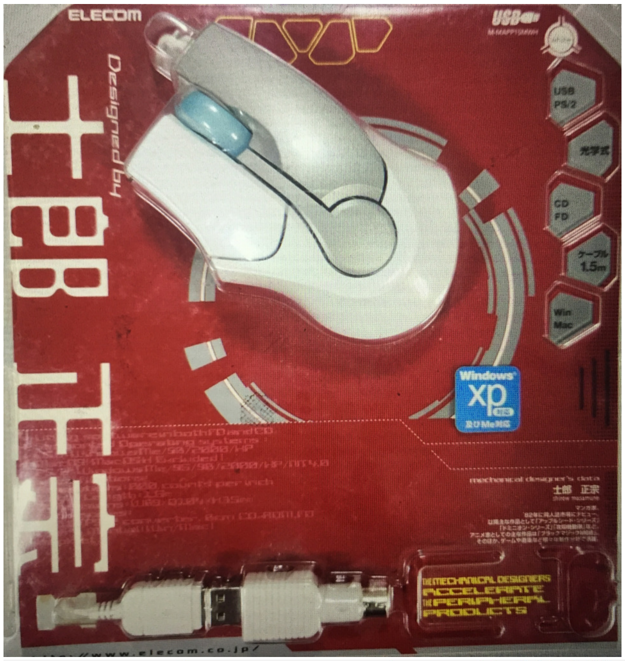
Ending lines reflect a great confusion or loss in humanity as a result of the dramatic physiological changes :

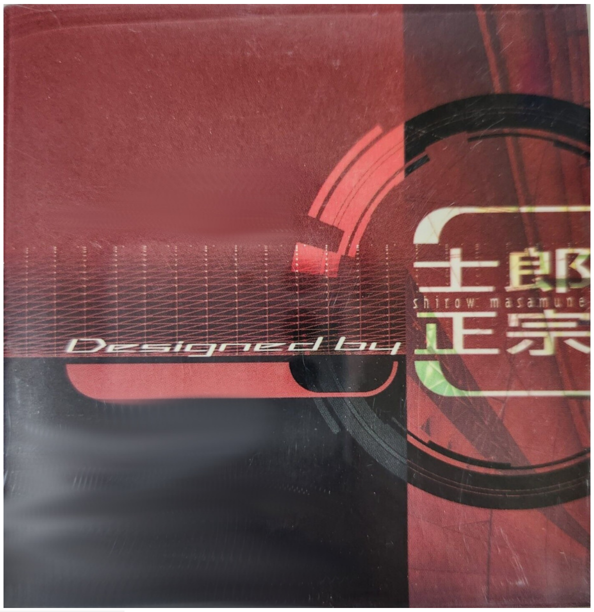
> ”I don’t understand anything anymore. I don’t know who I am, or what I’m doing. ... I can’t feel anything. My brain is just floating in space.”

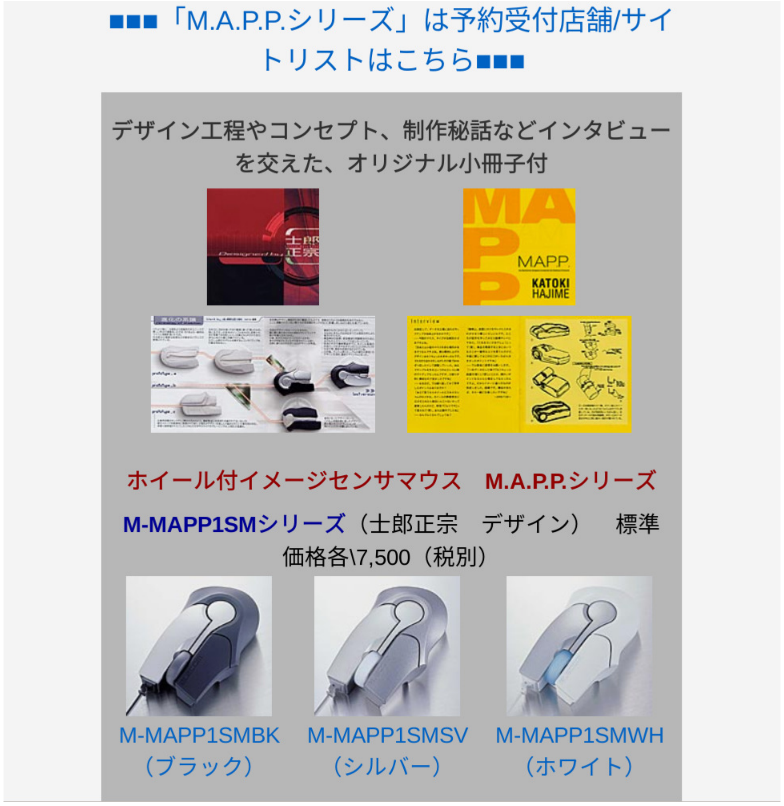
HARDWARE

Among noteworthy computer equipment or hardware is the little known collaboration between Masamune Shirow (creator of Ghost in the Shell, among others) and the company Elecom (a prominent vendor of peripherals in Japan, apparently).

A news publication by the maker from 2002 announced the resulting product - being the MAPP1SM series of mice, released in three colors : white [coded WH], silver [SV] and black [BK].


ELECOM
Designed by
士郎 正宗
USB
PS/2
光学式
CD FD
ケーブル 1.5m
Win Mac
Windows XP
THE MECHANICAL DESIGNERS ACCELERATE THE PERIPHERAL PRODUCTS


Designed by
士郎 正宗
shirow masamune



■■■「M.A.P.P.シリーズ」は予約受付店舗/サイトリストはこちら■■■

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M-MAPP1SMBK（ブラック）

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M-MAPP1SMWH（ホワイト）

[1-2] white variant and manual (third party source) [3] Elecom website

士郎正宗	Shirow Masamune [正宗 Masamune]
デザイン	design
シリーズ	series
マウス	mouse
ブラック	black
シルバー	silver
ホワイト	white

primary sources

elecom.co.jp/peripheral/mouse/mapp/index.asp
elecom.co.jp/news/20021015/mapp/news20021015.pdf
elecom.co.jp/news/20021015/mapp/

NOTES ON AMERICAN POLITICIANS AND THE TECH ELITE

Reagan to Obama transition : from financial to technological elites

A partnership between political and computer technology elites developed during the 2000s and 2010s whose milestones in the United States include several alliances and events for certain : Obama and Google, on one hand, and the Schwarzenegger-Tesla relationship.

The Obama presidency elevated the technology elite to quasi state actor status (in a similar fashion that Reagan/Nixon had done for free market economists, bankers or the financial elite[1]); in a way that was different from what had existed or had been thought normal during even the, all considered crazy, Bush era.

Obama had a swagger - briefly summed up as : young, bright and cool - and a moral flexibility that made him highly compatible with the juvenile disruptors out of Silicon Valley; In addition to sharing important social markers and common cultural ground (integrated at about the same handful of schools).

In the new balance of powers, the tech elite had not only been elevated to the status of equal partners, but it could be argued had asserted superiority already :

Most iconic for this process and resulting transformation of the landscape was Google's "interview" of the President[2], in which in casual business style the candidate Obama answered tech interview questions posed by Eric Schmidt, (CEO), measuring fittingness and suitability for the company - leading to the famous bubble sort answer. In other words, Obama had to answer to Google - not the other way around (all under the pretext of politically correct humor of course).

This event marked a strong symbolic shift in power - at least under Reagan it was still the President who gave out awards, whereas with Obama it was a future president who was patted on the back for good performance by a company...

Clinton and - to some degree - Bush's style was more in line with the world of 1990s IT corporations, cubicle and suits, while Obama was compatible with the now dominant norms of Web start ups, their affinity for open space and, (although phony), "horizontal" culture and outward, symbolic dislike of hierarchies. Differences aside, it was under Bush that most of the NSA Internet spying and private sector collusion took place and under Clinton/Gore that the Internet and Web were commercialized.

Another example of the cozy, hand-in-hand relationship between leading politicians and so-called leaders of the technology sector was Schwarzenegger and Tesla, especially during his role as Governor of California (the most key of all states when it comes to technology) :

Schwarzenegger's long-standing connection with Tesla goes back as far as 2006, in publicly documented fashion (a joint appearance with, then CEO, Martin Eberhard to promote Tesla's Roadster model at the LA Auto Show). S. called Musk "*an extraordinary leader*" while Musk praised the Governor for his support during the Toyota-Tesla press conference (2010). "*Obviously without the Governor's support and the legislator's support, I don't think we would be nearly as far along as we are today.*"

it's right here. What is the most efficient
way to sort a million 32-bit integers?

PRESS PASS
AUTO
COVERAGE
TOYOTA

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[1] e.g., the Presidential Medal of Freedom awarded to Friedman under and by Reagan.

[2] Per Google's own information : "This event took place on November 14, 2007, as part of the Candidates at Google series." (i.e. when Obama was a Senator).

Schwarzenegger's explanation for the success of what he called a "great partnership" was as follows :

> “*it is also very important to mention that this all happened because we have created tax incentives [emphasis], for this company, and for this partnership. Because they could have gone anywhere else in America : they could have gone to Nevada, to New Mexico, to Texas, to Florida - anywhere else, but they stayed here. Because of the tax incentives. Because financially it worked out.*”

primary sources

– “Innovation Agenda Barack Obama Talks at Google”, published by ‘Talks at Google’, on Nov. 15 2007. circa 1h */watch?v=m4yVlPqeZwo*
– “Toyota and Tesla Announce Collaboration on Electric Cars”, ‘The Auto Channel’, May 10 2010. c 15m */watch?v=IoETN2ZusZg*

Special 24

Camille Akmut

May 21, 2024

NEWS

— "Israel orders Al Jazeera to close"... *AP*, May 5.

> "*The extraordinary order, which includes* ***confiscating broadcast equipment, preventing the broadcast of the channel's reports and blocking its websites****, is believed to be the first time Israel has ever shuttered a foreign news outlet operating in the country.*"

The relevance of this piece of news is that Al Jazeera has been providing a coverage of the events far superior to any or most comparable news outlets, i.e. available broadly especially on television. In particular the presence of journalists on the ground and transmission of images directly from location (that is, what remains of Palestine now that Israel is inaccessible) has set it apart from its competitors whose brief and superficial treatment of the news - often in the form of barely seconds long flashes - rarely amount to more than second hand recital or cotton candy dense interpretation (BBC News where the most in-depth journalism concerns water contamination in Devon..., or Sky News where recently the merits of common sense in politics were discussed by clueless, parachuted down journalists, etc.).

In the last few days, coverage has been :

- graphic footage of the dead and maimed, including children and mutilated bodies (e.g. one grotesquely hanging crushed leg - later censored) and destruction of infrastructure so extensive that they recall, similar, WW2 images;

– interviews with local and international doctors;

– [on Monday] unusually extensive portions of the ICC prosecutor's statement were broadcast, just minutes after. A diplomacy pundit explained the invoked Article 70 (which we understood to be a part of Rome agreements and about interference in the decision);

– commentary by various experts e.g. one academic from the University of Cambridge;

– a documentary about censorship on U.S. American campuses, with one interviewee noting that "diversity" was celebrated but stopped with Israel and Palestine;

– a compilation of reactions from Israeli politicians regarding the ICC : e.g., the court - which represents hundreds of countries - is "antisemetic");

– [on Tuesday] a "student activist" was interviewed, who connected Gaza with economic themes citing profits made from the war, and called on workers to strike (her library featured a book on Lenin very prominently in the background...);

– the U.S. political reaction, including threats of reprisal against ICC staff;

– A long interview of Malaysia's outspoken Prime minister on Palestine primarily ending with uneasy questions about the Royal family and freedom of speech in the country

Otherwise, Iran's President's death was covered closely from first reports of a "hard landing" to 5 days of mourning.

Exceptional enough, Julian Assange's right to appeal was also reported.

[Tuesday] Zelenski's term was to come to an end after 5 years this May, but as long as the War in Ukraine continues he may remain in power... (not exactly a good motivation for peace - although the program refrained from expressing this interpretation).

In the Annals (a history of the Roman Empire in the first century, up to the Great Fire and Nero's death) Tacitus describes a military and political leader - Germanicus - sent to conquer, occupy and settle on foreign land. "The[y] ravaged and burnt the country for fifty miles around. No pity was shown to age or sex. Religious as well as secular centres were utterly destroyed". His orders were "to kill and kill. ... Only the total destruction of the tribe would end the war."[1]

In that same work, he reports a peculiar practice whereby punishment could be escaped "by grasping" or clutching "an effigy of the emperor", after a crime or an offense.[2]

— "Elizabeth Holmes shaves more time off her sentence", *CNN*, May 7.

> *"The Bureau of Prisons' online database currently shows that Holmes' expected release date from a Texas prison is August 16, 2032 — a slight reduction from her previous release date of December 29, 2032.*
>
> ***It's her second reduction in less than a year:*** *She previously had her 11-year-and-three-month sentence by about two years last July."*

Alternatively, see the Guardian's reporting from the same day, 'Theranos fraudster Elizabeth Holmes has prison sentence reduced again'.

— "Cerebras Systems, Aleph Alpha to supply AI to German military", *Reuters*, May 15.

> "Silicon Valley firm Cerebras Systems on Wednesday said it will supply a supercomputing system to Aleph Alpha, a German technology startup that will use it to develop artificial intelligence for the German Armed Forces.
>
> Cerebras has created a computing system that aims to rival Nvidia for training AI systems with huge amounts of data. **The company**

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[1] ch. 3. *The Annals of Imperial Rome.* Penguin. trans. M. Grant. 1996[1956]

[2] ibid., ch. 6.

> **has previously won a deal to supply G42, the government-backed firm in the United Arab Emirates, with AI supercomputers**, though those machines will be physically located in the United States.
>
> By contrast, the deal with Aleph Alpha, a leading AI firm viewed as among Europe's rivals to U.S. firms such as OpenAI, will involve shipping Cerebras supercomputers to a secure data center in Germany, the first time that a Cerebras system has been installed in Europe.
>
> "The German Armed Forces is a top-tier customer, and Aleph Alpha is one of the AI leaders," Cerebras Chief Executive Andrew Feldman told Reuters. "The competition was fierce."
>
> The two companies did not give a value for the deal but described it as a multi-year agreement in which Cerebras would help Aleph Alpha train generative AI models for the German Armed Forces.
>
> **"Like most companies, armed forces are looking for world class AI,"** Feldman said. "They're looking to train models (for) language, vision (and) multi-data type models." "

War criminals need good AI too...

Special 25

Camille Akmut

May 24, 2024

FILM

— *Cosmopolis*

Cronenberg, director of several notable works relevant to technology (Videodrome and Existenz, at least) has recently produced an addition to this list that is likely to have gone unnoticed even though meritorious.

Cosmopolis is a great social portrait whose equivalent in literature are works by the naturalists and realist writers of the 19th c., i.e. their preference for detailed, acute studies of various social groups (e.g. the workers of *Germinal*, the depressing provincialism of *Madame Bovary* etc.).

In English-language literature, Cosmopolis has antecedents like Fitzgerald's *The Great Gatsby*, Austen's *Pride and Prejudice*, Faulkner's *The Sound and the Fury*, Waugh's *Brideshead Revisited*, and more recently and more obviously *American Psycho*;

While in cinema it recalls works such as those of Woody Allen (his penchant for a certain subsection of the New York public...), Bunuel (the satirical *The Discreet Charm...*), Oliver stone's Wall Street or *My dinner with Andre* - both in terms of aesthetic preferences (minimalism) and content or preoccupations (the attention paid to the elite). Many other works could be cited : *Metropolitan*, *Lost in translation*, and to some degree the studio Ivory-Merchant...

The protagonist, Eric Packer — "head of Packer Capital" — is an updated Patrick Bateman or Gordon Gekko. When compared with real world figures, he reminds of a collage of Musk (the nerd-to-jock archetype) and McAfee (the paranoid and gun-loving aspect)... Cosmopolis' most direct forefather in recent cinema history is American Psycho's adaptation, except the financial elite background of the former is replaced and updated to the fintech crowd, fitting the current, changed context.

Finally, in terms of overall structure and timing (a brief period of time or segment of life leading to an explosive ending) one is reminded of films such as *Do The Right Thing* and *Dog Day Afternoon*; albeit, like many of Cronenberg movies, the actual ending is left open but strongly implied (the film in that way ends in a similar fashion as Videodrome and Existenz). In some other way yet, it could be said that formally Cosmopolis is a copy of the art documentary on Gibson, *No Maps for these territories.*

Cosmopolis focuses on a day in the life of a technology chief, whose nature and qualities are exposed or revealed through various encounters and interactions. In order these are :

- his co-founder, a technologist who expresses angst about being out of touch with the world...
- his wife, an old money heiress, who fashions herself artist (poet); and whose main function throughout is to represent values - opposing values - other than money. e.g., the arts, the life of the mind, etc.

- Michael, a quantitative (quant) wiz kid who plans on retiring at age 22...

- a lover, who deals in art

- Jane, a female collaborator of the Sheryl Sandberg type whose complaints mix feminism with corporatism : by hardships of single motherhood are meant communication problems with nannies.

- a private doctor

- another collaborator, whose extravagant title - “chief of theory” - is one more satire of the inventions coming from the technology world. Their philosophy does nothing more than to provide a justification for injustice (i.e. protests represent a fear of the future). They call an immolation happening right on the street unoriginal...

The interaction between
technology and capital
A SPECTER IS HAUNTING T

[2] Packer ends up in the middle of an ”anarchist” protest...

The protagonist’s main characteristics are :

- remoteness from common lives and concerns, an early height of which is reached during a conversation where geopolitical events are discussed and their possible impact on the value of the yen while a prostate examination is unfolding (by the same private doctor, in the same limousine)

- sociopathy (e.g. the fixation on buying out the Rothko chapel...)

- the, also pathological, obsession with data; evocative of the wave of, so-called, “data-focused” and “data-first” start ups and entrepreneurs of the 2000s...

- so-called precocity (seen in both Michael and the protagonist) and - connected to it - a world weariness despite young age especially visible in the protagonist who is rapidly burning out

- the decadence and privileges of the super rich

As a side note, Packer’s chief of theory came up with a concept similar to Varoufakis’ “cloud capital” except long before him, which she calls “cyber capital”. Of course, while Varoufakis takes himself seriously - presenting himself as no less than the herald of the end of capitalism - the chief of theory is not to be taken seriously :

They are portrayed as a sort of neo-guru or dubious motivational coach. Their job or function is, again, a satire of the really-existing title of chief of technology - except inverted : whereas a CTO is on the practical side, the COT is on the theoretical extreme end of things... whenever asked about details they reject demands by merely saying something along the lines of ‘I do not know about such things’.

Packer’s sociopathic genius - typical of the quantitative mind - is best expressed in the, formally correct, statement :

> “*One learns about the countries where unrest is occurring by riding the taxis here.*”

(i.e. the doctors and engineers of that country end up as taxi drivers in New York...)

One learns about the country where
unrest is occurring by riding the taxis here.

The glow of cyber-capital.
So radiant and seductive.

A last note about Cosmopolis being a philosophical film : There is something of the ‘Portrait of Dorian Gray’ in Cosmopolis, in which the appearance of the protagonist increasingly deteriorates as they abandon all morality (leading to shooting of the bodyguard and half-done haircut, through comments about depraved body odor following adultery for example).

NEWS / NOTES

— “*AI chip firm Nvidia’s profits up 628%*” [BBC News, 23 May, television]

— enshitification : the kind of concept that a kindergartner or grade schooler would come up with when they are still at the stage where they find poop and fart jokes exceedingly funny. Its embarrassing and astonishing adoption speaks volumes about the poor state of discourse. (Varoufakis - who has entered a quid pro quo friendship with the science fiction author - of course thinks it’s great.)

— Based on recent interviews, Varoufakis is lost on a number of issues. 1) He proposes to abolish cash as a means to eradicate corruption, and thus forgoes and forgets the anonymity or privacy benefits of cash for the wide population. But, those advantages[1] far outweigh solving a problem caused by a minority, even when its effects are big. Similar to ’curing’ an illness by overzealous treatment... 2) He wants to introduce a (national) digital ID, and often cites the Chinese case, as a means to lessen the hold of the banks on Internet and Web authentication - while activists and developers have been trying to find solutions to avoid personal identification. Since V. is neither a Marxist nor a communist, here is a radical proposal : de-commercialize the Web and (re)turn the Internet into a commons (pre-Clinton/Gore and the series of deregulation laws passed in the 1990s, hidden behind such cryptic and misleading designations as ‘high performance’...).

— Javier Milei and Argentina’s attraction for right wing U.S. tech elites :

During the recent rock show event in which he promoted his latest book[2] said about “*I went from post-Keynesian, Marxist to Libertarian anarcho capitalist*” [Al Jazaeera, 23 May, television]

For those who thought that Trump was supremely evil, Hitler reincarnate, and in any case could hardly be topped : Milei is certainly one step above, who looked properly insane during the event - as he does during virtually all public appearances.

He enjoys calling himself by the megalomaniacal title of “the lion” (accompanied by a roar, facilitated by the Spanish language...) e.g. when he was invited to Spain by the local far right groups there [ibid.].

Milei, as far as we can tell, is a direct inheritor of the most conservative and dangerous forces in South American political history, (the kind that can be seen in action in The Battle for Chile), and is - with no exaggeration - a fascist by which we mean precisely the blood alliance of State and Capital.

---

[1] as simple but essential things as public transportation, grocery shopping, etc.

[2] *Capitalism, Socialism and the Neo-classical plot*? (n.b. all of Milei’s questionable intellectual output bears about the same title, expressing more or less the - both general and unoriginal - idea that communism failed and the Austrian economists won...)

Ref.

i) ‘The New Cold War & What’s After Capitalism’. National Press Club of Australia. March 13, 2024 [held, published one day later]. circa 1 hour `/watch?v=S3_I18eEABU`

ii) ‘How Techno-Feudalism Killed Capitalism’. Letters and Politics. May 14, 2024. c 45m `/watch?v=BytyLG7Rdp8`

asked about “the goods and the bads of the digitalization of our lives”, Varoufakis answered :

> “*I’m all for digitalization. I love technology. I’m not a Luddite or neo-Luddite. I don’t want to smash the machines, and go back to a bucolic lifestyle.*
>
> *As a Finance Minister it was my intention effectively to ban cash, to make all transactions digital, in order to do away with the problem of tax evasion.*” [i, 49 m.]

as for the second point :

> “*it is high time that we own our digital identity, because you and I have no way of proving who we are on the Internet unless we beg some conglomerate or bank to vouch for who we are, because unlike the analog world where you know our States provide us with a Driver’s license or a Passport which proves who we are; and the internet they don’t, you have to beg Google to testify to who you are*” [i, 44m]

For the endorsement of Doctorow :

> “*you know a friend of mine, Cory Doctorow - who you may know - has come up with a term for describing what you described and it’s a beautiful term, it should be quoted[voted?] as the new scientific word : he calls it enshitification*” [ii, 45 m.]

We could - but it would be painful due to recent changes with the platform and to a degree futile - document the laborious you-pat-my-back-I-pat-yours, lovey dovey exchanges and electronic transactions between the two which had unfolded on Twitter in the months before... (V.’s re-tweet of Doctorow’s new book etc. etc.)

NATIONAL PRESS CLUB OF AUSTRALIA
lifestyle as a finance minister it was
my intention effectively to ban cash

NATIONAL PRESS CLUB OF AUSTRALIA
own our digital identity because you and
I have no way of proving who we are

you know a friend of mine Cory Doo who
may you may know

(Yes, one knows about Cory Doctorow after just a few pages : the FDR of science-fiction, but certainly not the Lenin of that literature.)

Another ‘friend’ of Varoufakis, who seems intent on collecting all of the heterodox, revisionist, barely Marxist figures of the contemporary left starting with Chomsky : Zizek criticizes Michel Foucault for what he calls his limiting “transcendental historicism”, per his own wording naturally, and which he views as an erring of philosophy, but both he and his colleague are below not beyond that philosopher. Foucault might have pointed out that “identities” are complicated, if not overrated, in that they have both a liberation effect (the common consciousness and collective organization enabled and possibly required for effective political action) and a limiting, regressive aspect (the data processing facilitated by those same identities or categories, now imposed on the individual, and surveillance...)

Special 26

Camille Akmut

May 28, 2024

NEWS

— “US Senate votes to renew Fisa surveillance program” *The Guardian*, April 19.

A law that went largely ignored and was not nearly enough covered, as almost everything concerning FISA - despite having been a big part of the 2013 NSA revelations. (Snowden as one of the few public figures had started bringing attention to it weeks, if not months beforehand.)

There are a number of causes that have bipartisan support in the United States, among which :

1) Capitalism and the issue of ownership - so deeply accepted that it is never questioned. The main parties are capitalist. At best, a fraction of Democrats called “progressive” demand reformist gains, but only so as to make capitalism a little more comfortable, lost by the next election - a process that Lenin fully understood and described.

2) although not completely disconnected, being a part of Defense and war industry, but much more astonishing is that National security and surveillance, too, should have now become an issue of overwhelming cross-party agreement. Leading to such, otherwise unexplainable events as the landslide FISA victory; 2 votes to 1 in the House of Representatives after a little hacking and tuning i.e. bringing down the period of effect, before making it through the Senate...

In the past it was far from obvious that such topics should be associated with the left (c.f. Watergate and the scandals of the Nixon era, the Church committee chaired by the eponymous Democrat, Vietnam war protests etc.). Today there are few dissenters on both sides, and surprising still – from the point of view of the reversal of values evoked – is that right-wing or conservative figures should be on occasion the most numerous or vocal opponents (constitutionalists, on legal grounds, or Libertarians, based on principles, ideally applied consistently, in defense of the freedoms of the individual before the State[1]).

FISA’s history is full of *in extremis* extensions and Machiavelian plays (replacing attorneys/judges etc.). It has now existed for a quarter of a century and survived 4 Presidents, of all colors?

> “Majority leader Chuck Schumer says approving bill was ‘right thing’
> for Democrats and Republicans to do

---

[1] Communists and Libertarians have a distaste for the State but with widely different plans, outlooks : the Communists based on the theory that under capitalism the State serves the interests of capitalists (thus the precise notion of Bourgeois State); Its disappearance is the effective way of preventing its harnessing by the dominant class.

> The US Senate voted late on Friday night to approve the reauthorization of the Fisa surveillance program, narrowly preventing its midnight expiration.
>
> The reauthorization of the Foreign Intelligence Surveillance Act secures what supporters call a key element of the United States' foreign intelligence-gathering operation.
>
> **"Democrats and Republicans came together and did the right thing for our country's safety," said Chuck Schumer, the leader of the Democratic majority in the Senate.**
>
> **"We all know one thing: letting Fisa expire would be dangerous. It's an important part of our national security**, to stop acts of terror, drug trafficking and violent extremism."
>
> Fisa has attracted criticism from some Republican and Democratic lawmakers, who argue it violates Americans' constitutional right to privacy. **The bill was blocked three times in the past five months by Republicans in the House of Representatives bucking their party**, before passing last week by a 273-147 vote when its duration was shortened from five years to two years.
>
> The White House, intelligence chiefs and top lawmakers on the House intelligence committee warned of potentially catastrophic effects of not reauthorizing the program, which was first created in the aftermath of the 9/11 attacks.
>
> Although the right to privacy is enshrined in the US constitution, the data of foreign nationals gathered by the program often includes communications with Americans, and can be mined by domestic law enforcement bodies such as the FBI without a warrant."

A piece published days before the Senate vote took place[2], in order to (unsuccessfully) warn of it, gave more details and background.

> "A little-known amendment to the reauthorized version of Fisa would enlarge the government's surveillance powers to a drastic, draconian degree
>
> The US House of Representatives agreed to reauthorize a controversial spying law known as Section 702 of the Foreign Intelligence Surveillance Act last Friday without any meaningful reforms, dashing hopes that Congress might finally put a stop to intelligence agencies' warrantless surveillance of Americans' emails, text messages and phone calls."

According to it, the measure not only renewed the program but greatly expanded it.

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[2] In the same newspaper : "The US isn't just reauthorizing its surveillance laws – it's vastly expanding them", April 16.

> "Section 702 in its current form allows the government to compel communications giants like Google and Verizon to turn over information. An amendment to the bill approved by the House vastly increases the law's scope. The Turner-Himes amendment – so named for its champions Representatives Mike Turner and Jim Himes – would permit federal law enforcement to also force "any other service provider" with access to communications equipment to hand over data."

This commentary doesn't spell it out fully, but Mike Turner - a Republican, is the Chairman of the House Intelligence Committee (since January 2023) while Jim Himes, a Democrat, is its Ranking member (the second highest position, sometimes called vice-Chairman).[3]

Not to be confused with the Senate counterpart, Intelligence Committee[4]... (Ron Wyden, who is also mentioned, is part of the latter.)

For all its merits, this commentary of an unmistakable liberal taint ends up in all of the necessary contradictions that liberals must eventually face, and thus features some of the follies of the liberal mind :

Ron Wyden, a Democrat, is cited and singled out as a sort of heroic opponent to the law while Turner is criticized for his proposition the law could be used on critics of the war in Gaza, which the commentator finds outrageous...

Except Wyden is a dangerous supporter of Israel - which the commentator either does not know, does not understand or does not acknowledge. Among Wyden's legacy is to have been cosponsor of the grotesquely shameful 'Israel Anti-Boycott Act' of 2017[5], the United States-Israel Security Assistance Authorization Act of 2018[6] and, again, 2020[7] and most recently celebrated the $100 billion(!) package aid to Israel, Ukraine and Taiwan in April 2024.

Since Wyden is a darling on certain subsections of the public, especially on the left, we must push the illiberalism a little further : described as "a longtime supporter of digital rights"[8], LGBT and women's rights as well as more identity-based or cultural issues; But, more importantly, he is as hawkish as anyone in Washington when it comes to Israel, to put it plainly a zionist not fundamentally different from the others.

Maybe Wyden and his allies - be it in politics, the media or civil society - ought to find that more "terrifying" (the word he used for section 720)... In fact the EFF went as far as calling Wyden "*a well-recognized champion of free speech*" even though the IABA is clearly anti-free speech and one doesn't need to be a legal scholar to understand it ("*The bill prohibits any U.S. person engaged interstate or foreign commerce from supporting*" etc. etc.).

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[3] *intelligence.house.gov/about*

[4] *intelligence.senate.gov*

[5] S.720 (date cos. 06/12/2017)

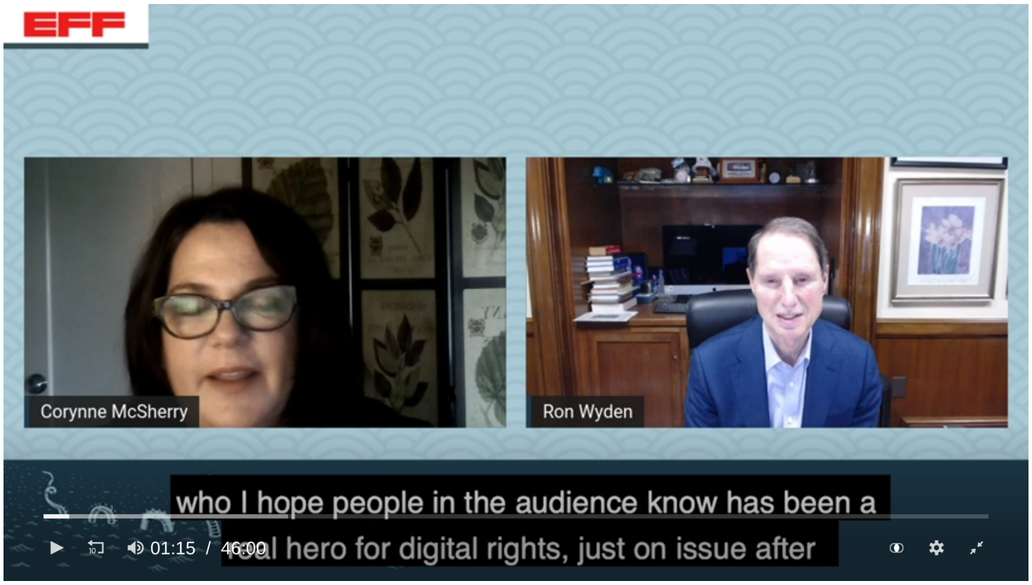
[6] S.2497 (03/07/2018)

[7] S.3176 (05/05/2020)

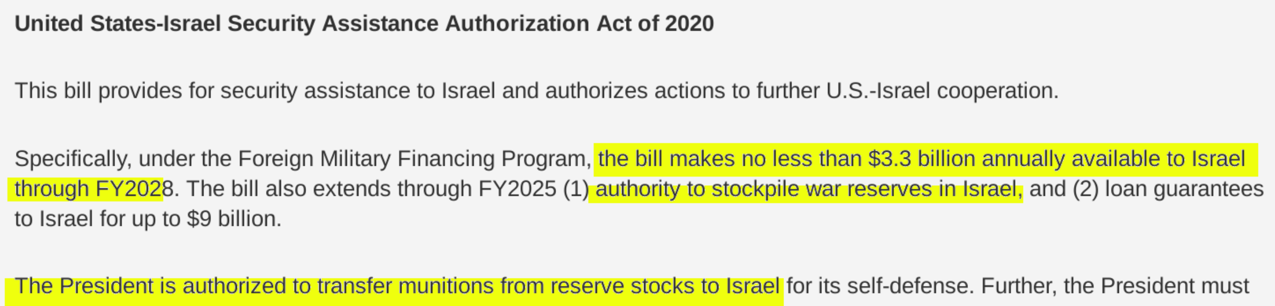
[8] per the weak, business-friendly (and generally misguided) EFF, which chose Wyden as a special guest for its 30th anniversary in 2021, and called him on that occasion "*a real hero*".

Ref.

congress.gov/bill/115th-congress/senate-bill/720/cosponsors
congress.gov/bill/115th-congress/senate-bill/2497/cosponsors
congress.gov/bill/116th-congress/senate-bill/3176/cosponsors
eff.org/deeplinks/2021/04/eff-30-protecting-free-speech-senator-ron-wyden



who I hope people in the audience know has been a
real hero for digital rights, just on issue after



United States-Israel Security Assistance Authorization Act of 2020

This bill provides for security assistance to Israel and authorizes actions to further U.S.-Israel cooperation.

Specifically, under the Foreign Military Financing Program, the bill makes no less than $3.3 billion annually available to Israel through FY2028. The bill also extends through FY2025 (1) authority to stockpile war reserves in Israel, and (2) loan guarantees to Israel for up to $9 billion.

The President is authorized to transfer munitions from reserve stocks to Israel for its self-defense. Further, the President must

Special 27

Camille Akmut

July 15, 2024

NEWS

— “Spying, hacking and intimidation: Israel’s nine-year ‘war’ on the ICC exposed” *Guardian*, May 28 2024.

> “Israeli intelligence captured the communications of numerous ICC officials, including Khan and his predecessor as prosecutor, Fatou Bensouda, intercepting phone calls, messages, emails and documents.
>
> The surveillance was ongoing in recent months, providing Israel’s prime minister, Benjamin Netanyahu, with advance knowledge of the prosecutor’s intentions. **A recent intercepted communication suggested that Khan wanted to issue arrest warrants against Israelis but was under “tremendous pressure from the United States”**, according to a source familiar with its contents.
>
> (...)
>
> Bensouda, who as chief prosecutor opened the ICC’s investigation in 2021, paving the way for last week’s announcement, was also spied on and allegedly threatened.
>
> Netanyahu (...) was described by one intelligence source as being “obsessed” with intercepts about the case. Overseen by his national security advisers, the **efforts involved the domestic spy agency, the Shin Bet, as well as the military’s intelligence directorate, Aman, and cyber-intelligence division, Unit 8200.** Intelligence gleaned from intercepts was, sources said, disseminated to government ministries of justice, foreign affairs and strategic affairs.
>
> **A covert operation against Bensouda, revealed on Tuesday by the Guardian, was run personally by Netanyahu’s close ally Yossi Cohen, who was at the time the director of Israel’s foreign intelligence agency, the Mossad. At one stage, the spy chief even enlisted the help of the then president of the Democratic Republic of the Congo, Joseph Kabila.**
>
> Details of Israel’s nine-year campaign to thwart the ICC’s inquiry have been uncovered by the Guardian, an Israeli-Palestinian publication +972 Magazine and Local Call, a Hebrew-language outlet.
>
> The joint investigation draws on interviews with more than two dozen current and former Israeli intelligence officers and government officials, senior ICC figures, diplomats and lawyers familiar with the ICC case and Israel’s efforts to undermine it.”

— “The Destruction of Gaza’s Internet Is Complete” *Wired*, Oct. 27 2023.

> “For more than three weeks, Gaza has faced an almost total internet blackout. The cables, cell towers, and infrastructure needed to keep people online have been damaged or destroyed as Israel launched thousands of missiles in response to Hamas attacking Israel and taking hundreds of hostages on October 7. Then, this evening, amid reports of heavy bombing in Gaza, some of the last remaining connectivity disappeared.”

See also “Internet Blackouts in Gaza Are a New Weapon...” Nov. 7 2023.

Furthermore the practice is ongoing based on : “Israel jams Internet and telecommunications networks in Southern Gaza” (*Al Jazeera*, May 29 2024, television).

— “Israel extends Al Jazeera ban by 45 days, citing security threat” *Reuters*, June 9 2024.

> “A ban on Al Jazeera’s operations in Israel was extended for another 45 days by Israel’s telecoms regulator on Sunday after the cabinet agreed its broadcasts posed a threat to security.
>
> A Tel Aviv court last week upheld an initial 35-day ban on Al Jazeera operations in Israel, imposed by the government **on national security grounds**, which ended on Saturday.”

The ban is still active, forcing the news network to report from nearby countries. As for the threat posed, it seems to be that of education, which is of course central for any democracy and, perhaps even more so, non-democracy...*

— “Palestinians say Microsoft unfairly closing their accounts” *BBC*, July 11 2024.

> “Palestinians calling home to Gaza on Skype have had their digital lives destroyed, after Microsoft closed their email accounts without warning.”

— “Samsung Union Workers Launch Indefinite Strike” *New York Times*, July 9 2024.

> “Unionized workers at Samsung Electronics said Wednesday they would go on an indefinite strike, an escalation of a rare labor dispute that could disrupt the technology giant’s world-leading chip business.
>
> An estimated **6,500 workers walked off the job** on Monday for a planned three-day strike over pay and working conditions. The Nationwide Samsung Electronics Union decided to extend the strike after “hearing no word” from the company, according to Lee Hyun Kuk, the vice president of **the union, which represents more than 31,000 workers, or a quarter of the work force** at Samsung Electronics.
>
> **Samsung, South Korea’s biggest private employer**, has long been the world’s largest maker of memory chips, which help computers and other electronics equipment store information. The company is also a leading manufacturer of logic chips, which make computers run, behind only Taiwan Semiconductor Manufacturing Company.
>
> The union said it has been negotiating with Samsung since January over vacation days and wages.
>
> **“As the strike goes on, the management’s blood will dry out and they will eventually come to the negotiating table on their knees,” the union said** in a statement.
>
> The union said its work stoppage this week has slowed some Samsung operations and production. A Samsung representative said the strike has not affected production and it would work to avoid disruptions in the future. The company remained “committed to engaging in good faith negotiations with the union,” the representative said.
>
> **Because of the “high level of automation in the factories and the low actual need for manual labor,” the impact of the strike was expected to be minimal**, said Avril Wu, a senior research vice president at TrendForce, a market research firm.”

We followed these protests on television : The workers were wearing red bandannas and black - martial arts like - outfits, and looked highly disciplined. They refused a salary increase proposed by the company because they felt it was too low, at 5-6% (that’s worker power!). Employees were recommended to stay at home, while K-Pop concerts were also held.

[

*The quality of programming on Al Jazeera is exceptional and unlike most of the rest of television. Among recent interviews :

Brian Eno and the economist Ha-Joon Chang - an hour or so long of nothing but capitalism critique, which is unheard for mainstream media. About the IMF, responding to a question from an audience member, Ha-Joon Chang answered : “If you go to the same doctor [so many] times, it’s a problem”. He also said that it was better to teach someone how to fish, to which Eno interjected that this was true except if capitalists had taken all the fish away...

Daniel Ellsberg argued that the primary role of the media was to sell wars and that wars, loosing or winning alike, were all profitable. He also talked about leaks, his own and, we believe, Chelsea Manning. There may have been an argument about wars committed against people of dark skin colors evoking less sympathy in the West, than those involving white Christians... (A re-broadcast, originally from 2022?)

The US diplomat who was the United States spokesperson for the Middle East and resigned after 18 years said that expert opinions were being rewritten by superiors, and that blockage of aid, under US law should result in interruption of weapons exports. She was also pressured to appear on television to defend talking points which she refused to do. Some colleagues were critical, but others careerists. She stopped working in her role because she felt these policies were actively harming the reputation of the USA internationally, which had no standing left on human rights considering its active role in the war on Palestine.

Raoul Peck, two sessions (we keep missing it due to impractical hours).

In a documentary on the ICC the question was asked if the court was tough on third world countries, e.g. Africa, but lenient or inactive when it came to major powers and their allies. The court’s financing and implications was also explored.

]

Special 28

Camille Akmut

July 28, 2024

The history and sociology of computer science and technology
Histoire et sociologie de l'informatique et des technologies de l'ordinateur
Geschichte und Soziologie der Informatik und Computer-gestützten Technologien

NEWS

— Crowdstrike July 2024 event

As no official or stable designation exists, yet, we propose the above, based on the name of the company involved and incident date.

Due to a "faulty update", that is a change in the software. Banks, supermarkets, airlines, healthcare were affected i.e. key sectors of society.

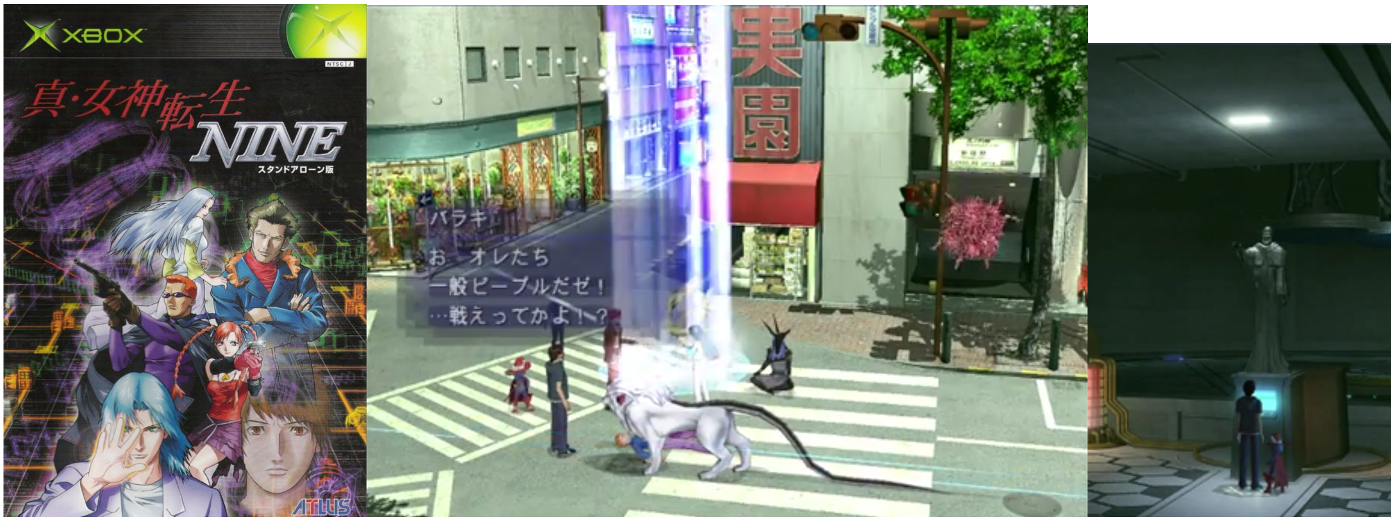
['IT outage hits hospitals, GPs and pharmacies'. BBC, July 20, television]

A seemingly random traveler, (stuck at a Paris airport?), spoke about "*the fragility of our highly digital*" lives or worlds, when interviewed.

[Al Jazeera, July 18-19, television]

NOTES ON THE HISTORY OF VIDEO GAMES

— *Shin Megami Tensei NINE*



バラキ
お　オレたち
一般ピープルだぜ！
…戦えってかよ！？

Il. [2] first enemy encounter (a red demon appears at a performance)

As we have, the Xbox is regarded a primarily action-oriented console, and in less abstracted descriptions epitome of "bro" entertainment, owing to defining titles like Halo or Dead or Alive and its volley ball spin-offs whose busty, bikini clad protagonists leave little doubt as to marketing intention and, connected, intended audience... If this reputation is not entirely undeserved, its library does have in its lesser known parts titles that deserve better recognition, including releases exclusive to certain regions (non-Western).

Among them is *Shin Megami Tensei NINE*, a Japan-only title that may be unknown even to fans of the series and beyond, more widely, RPGs.[1]

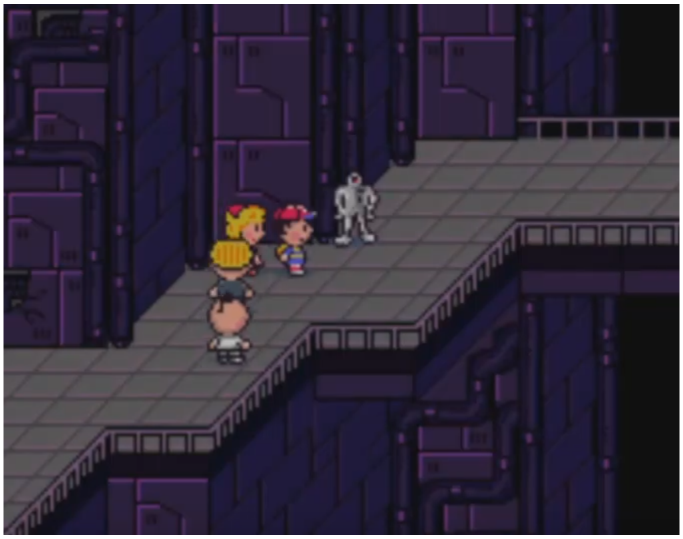
Story and environment look to be that of a post-apocalypse where people find retreat in virtual worlds, mostly a recreation - excellent, by the way - of Tokyo and its various distinctive neighborhoods.

Soundtrack is a fusion jazz-techno mix, typical of 1990s and early 2000s. Most famous is the dissonant Rappongi theme, which has already led to memes ("*Wow! I feel like I was just on another planet. What if this is what it feels like to be Buster?*", part of a Arthur/SMT mash-up). Bar theme, for another example.

We are not aware of a game translation. However a trend is that individuals have resorted to creating scripts and videos featuring English subtitles over recorded gameplay (because less technically difficult than a transformation of the software itself, one can assume).

— *Earthbound*'s sword of kings

A notable, rare item in Mother 2.



Il. Poo (back of the queue) with Starman Super

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[1] A different title worth mentioning - again, insofar as it offers a contrast to the general Xbox experience - is *Hunter: The Reckoning*, adaption of the World of Darkness tabletop game, related to Vampire: The Masquerade.

Based on information from the Guide - excellent and one of the best such documents produced, it cannot be repeated enough - it is the only weapon specific to Poo (`+30` to offense). Further it gives the indication that the Sword of Kings is obtained from an enemy (abbreviated EN).

On the other hand the Yo-yo, one of few other weapons that can be equipped by Poo, decreases offense... Compared to dozen of weapons available to the rest of characters.[2]

Poo, the "Mysterious Prince from the East" is maybe the least known of the characters of EarthBound, alongside Ness, Paula and Jeff : "His weapons and protections are mostly unknown because of his mysterious background."[3]

It is found in the area known as Winters[4], "the frozen north", at Stonehenge in the caves; of the latter the Guide tells us : "At the very center of Stonehenge, visitors will notice a small round hole, just large enough for them to climb into." Enemies in question are Starman Super.

— *Deus Ex* 2

Begins in Seattle after a terrorist attack in Chicago. (As per the introduction movie.)

Invisible War, abbreviated IW, being the second entry of Deus Ex has been viewed as one of the, if not the worst in a hallowed series, coming after what is widely considered a masterpiece.

Representative for this sentiment is the dismissive and bitter review it received in respected, independent journal *Canard PC*, under the devastating title "Deus Ex: an ex-good game" - including a question mark initially, but rapidly done away with, at the latest by the time of Descartes and La Mettrie jokes about cat-machines, beginning with a comparison to "dumb action films and clothes in poor taste"...

This was all the worse as coming from the same author who had given much praise to the first game in *Joystick*, during the golden age of that magazine (a crises leading to a split and the founding of CPC, based on a majority ownership by staff if we understand its structure correctly). Added to this, Deus Ex 2 reviews were the magazine's first ever and fifth reviews, moving from curiosity and caution to demolition.

Another distinction of IW being its double release on consoles (Xbox), whereas the first Deus Ex was originally a pure PC game.

Also worth mentioning is the Prima Guide which gives a lot of information on the continuities between Deus Ex 1 and 2 :

> "*In the world of DXIW, all three DX endgames happened. JC [Denton] destroyed the*

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[2] EarthBound Nintendo Player's Guide, p. 122 (Weapons section).

[3] Ibid., pp. 6-7 ('Our hero and his friend').

[4] Ibid., pp. 43 f.

> *telecommunications infrastructure, merged with Helios, and intended to coordinate with the Illuminati to rebuild society. However, the merger didn't go as planned...*” p. 8

Ref.

- *Canard PC*. Nov. 26th, 2003. (Headline “We played it and report to you before everyone else”)
- *Canard PC*. December 23rd, 2003. (Headline “Deus Ex 2 : the disappointment”)
- *Joystick*. September 2000. #118. (Deus Ex cover)
- Prima's Official Strategy Guide. 2003. circa 130 pages.